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NO I.

ORIGINAL LECTURES.

CARTWRIGHT LECTURES.

*Delivered before the
Association of the Alumni of the College of Physicians and Surgeons,
New York, November 21, 1889.*

BY JOHN S. BILLINGS, M.D.,
U. S. ARMY.

LECTURE III. and IV.

ON VITAL AND MEDICAL STATISTICS.

(Concluded from page 710, Dec. 28, 1889.)

SUPPOSE that, for the sake of testing the relative efficiency of two different modes of treatment, or of the general progress made during a series of years in therapeutics, we take the statistics of a particular disease—which should be one having a tolerably definite train of symptoms, so as to be easily recognized. A disease which is common to select for this purpose is acute lobar pneumonia. Suppose, now, that in a given group of cases of pneumonia, subjected to one method of treatment, the mortality or the proportion of deaths is found to be greater in another series of cases subjected to a different treatment, are we thereby authorized to conclude that that mode of treatment connected with the lowest mortality is really the cause of the low mortality? By no means. Before we can do this, we have to settle the character of the cases, the proportion of those in each group occurring in advanced age or in intemperate persons, or in those affected with other diseases, or in certain races, because all these circumstances influence the death-rate. We have also to take into account the total number of cases in each group, in order to make an allowance for the probable error due to small numbers. If the two groups of cases have occurred in different localities, or have been treated in different institutions, we have then to take into account the special influences of the locality or institution, as far as it is possible to do so, and not until all these corrections have been made can we fairly estimate the relative influence of the treatment.

I have collected the statistics of 209,755 cases of pneumonia occurring in this country and in Europe within the last fifty years, as shown by the following table, giving an average death-rate of 21.11 per cent. The distinction of sex is given in 33,904 of these cases, showing a death-rate of 19.86 per cent. in males and 24.68 per cent. in females:

Pneumonia.	Cases.	Deaths.	Percentage of Mortality.
Civil hospitals, German and Austrian	44,952	9,868	21.95
Civil hospitals, British	3,467	770	22.20
" " Canada	353	91	25.77
" " American	6,259	1,918	30.64
" " India	133	41	30.82
Total	55,164	12,688	23.00

Pneumonia.	Cases.	Deaths.	Percentage of Mortality.
Military hospitals, Austrian, 1873-82	9,007	1,276	14.16
Military hospitals, U. S. Army, 1877-88	2,430	455	18.72
Military hospitals, Br. Army (Crimea, 1854-57)	590	125	21.18
Military hospitals, U. S. Army (1861-66), White troops	61,204	14,738	24.08
Military hospitals, U. S. Army (1861-66) Colored troops	16,133	5,233	32.43
Total, military hospitals	89,364	21,827	24.42
U. S. Navy, 1873-88	933	92	9.86
Br. Navy, 1872-76	1,670	194	11.49
U. S. Marine-Hospital Service, 1872-88	3,454	573	16.58
Total, Naval and Marine Service	6,057	859	14.18
Norway, 1880-85 (statistics for kingdom)	59,170	8,907	15.05
Grand total	209,755	44,281	21.11

Pneumonia Cases with Distinction of Sex.

Civil hospitals, males	22,862	4,539	19.86
" " females	11,042	2,726	24.68
Total	33,904		

The distinction of deaths by ages for each sex is given in 24,557 cases, and from these data I have calculated the proportion of deaths to cases in each age-group, the result showing the immense importance of age as a factor in the death-rate from this disease.

In the absence of statistics of cases and deaths by ages, we can get very little information from statements of death-rates from pneumonia. For example, the death-rate in U. S. hospitals from pneumonia from 1877 to 1888 was 18.72 per cent. of the cases treated. Was this a high or a low death-rate? We can only say that it was probably rather below the average, since the average death-rate for males between 20 and 50 years of age is 19.9 per cent. of cases treated. The importance of such considerations is well illustrated in a paper by Dr. C. W. Townsend and A. Coolidge, contained in THE MEDICAL NEWS, July 27, 1889, p. 85.

This paper is a discussion of all the cases of acute lobar pneumonia treated at the Massachusetts General Hospital from 1822 to the present time, the figures being divided into periods of ten years, making seven decades in all.

The result would indicate a steady rise in fatality from 1822 to the present time. What are the circumstances

which make the cases of pneumonia coming into the hospital during the last few decades more fatal than those which occurred during the first three or four decades? One of the first things investigated was the average ages of the cases of pneumonia admitted in each decade, and the results obtained showed that there was a greater number of patients over fifty years of age in the latter decades, and that the average age is steadily increasing. In like manner, the proportion of cases occurring in persons of intemperate habits, or complicated with other diseases, was examined for each decade. The influence of race was also estimated, with the result that in Americans 9 per cent., in Irish 11 per cent., and in other foreigners 14 per cent. were fatal; that was omitting all fatal cases over fifty years of age who were intemperate or complicated.

Now, if we take the mortality and make the necessary corrections for the influence of age, or proportion of intemperate and complicated cases, and set apart the influence of the causes of death which are entirely independent of treatment, we find that there is but little variation of mortality from decade to decade, and if the influence of race were brought in, we could not infer that, upon the whole, there had been any material change in the mortality of pneumonia for the last sixty-eight years, although there have been very great variations in the treatment during that time.

The conclusions arrived at by the authors are as follows:

1. In the 1000 cases of acute lobar pneumonia treated at the Massachusetts General Hospital, from 1822 to 1889, there was a mortality of 25 per cent.

2. The mortality has gradually increased from 10 per cent. in the first decade to 28 per cent. in the present decade.

3. This increase is deceptive for the following reasons, all of which were shown to be a cause of a large mortality:

- (a) The average age of the patients has been increasing from the first to the last decade.

- (b) The relative number of complicated and delicate cases has increased.

- (c) The relative number of intemperate cases has increased.

- (d) The relative number of foreigners has increased.

4. These causes are sufficient to explain the entire rise in the mortality.

5. Treatment, which was heroic before 1850, transitional between 1850 and 1860, and expectant and sustaining since 1860, has not, therefore, influenced the mortality rate.

6. Treatment has not influenced the duration of the disease or of its convalescence.

Suppose we try to estimate the relative value of a particular treatment of rheumatism, say by salicylates. We find several tables in medical literature giving the results of treatment by this and other methods. As a type, take the analysis of 1200 cases treated at Guy's Hospital, given by Hood (*British Medical Journal*, December 31, 1881, p. 1119), in which he gives the average duration of illness, number of relapses, and number of cases of cardiac complications, in 350 cases treated with salicylates, and in 350 cases treated without them, and concludes that relapses and cardiac complications were more frequent

under the salicylate treatment, but that the pain ceased sooner and the average length of stay in hospital was less. But the cases are not tabulated by sex, age, race, etc., so that we can estimate the bearings of these circumstances on the results; nor in any tables are these results thus classified.

In the fourth volume of the Collective Investigation Record of the British Medical Association there is a table of 655 cases of acute rheumatism, in which the details of each case are given under twenty-seven heads. Dr. Whipham analyzes these, showing how many cases there were in each sex, how many there were in each group of ages, how many in each occupation, etc., but he does not systematically attempt to group these circumstances except as regards teetotalers, temperate and intemperate persons; in other words, he does not tabulate them as a vital statistician would do, so as to show how many of each sex in the first attack in each age-group recovered, died, had sequelæ, etc., when treated by salicylates, and how many when not treated. In attempting to treat the data by formal statistical methods, it will soon be seen that they are totally insufficient in number to give definite results. For example, in temperate males, having their first attack, and treated with salicylic acid, of 25, between five and fifteen years of age, 1 died; of 77, between fifteen and twenty-five, 1 died; of 35, between twenty-five and thirty-five, none died; and of 17, between thirty-five and forty-five, 2 died. Of the intemperate males under the same conditions—16 in all—none died. Are we to conclude that intemperate males with acute rheumatism should be treated with salicylic acid? Not at all—it would require something like 60,000 cases instead of 600 to demonstrate anything of this kind.

Evidently the statistical data which are of the most importance differ for different diseases. If, for example, we are comparing the mortality from pneumonia under different systems of treatment, it is clear that we must have the data with subdivisions by age, and the same would hold good for Bright's disease, and, in fact, for almost all diseases, if the law of decline of vital energy with advancing years holds good. But, for cancer, the data of sex and race are quite as important as those for age.

An important point in medical and vital statistics is to keep the current record, or what may be called the day-book account, entirely separate and distinct from the classification or modes of tabulation. The current record must be made complete at the time, for if any items are left out they can never be replaced. But this record once made may be used in various systems of classification and comparison for many years afterward. If an attempt be made to put this record into the form of a classified return primarily, it is certain to be defective, and will not be applicable to researches of another kind.

In the reviews of the progress of medicine, of which we already have a large supply in the shape of annual addresses and centennial literature, and to which extensive additions will, no doubt, be made at the close of the present century ten years hence, you will find more or less elaborate statements of the advances which have been made in diagnosis, pathology, preventive medicine, and surgical therapeutics in all its branches. Also, it is easy to show that we have made great advances in the

art of relieving pain. But when we seek by statistical methods to determine what advances we have made in the prevention of death by the internal use of drugs, it must be confessed that the data are, for the most part, wanting, and that the optimist and the pessimist can propound theories and beliefs upon nearly an equal footing—that is, that of ignorance of the real facts in the case.

It is easy to see that the statistics of fevers collected in the last century, before typhus, enteric, and relapsing fevers were distinguished from each other, are of little use now, and modern bacteriology has destroyed, to a great extent, the value of the old statistics of tubercular diseases, typhoid fever, cholera, etc., and of the statistics of surgical operations. They have rendered some service in their day, but their value is now chiefly historical. There are, however, in medical literature, a very considerable number of cases which have been recorded with sufficient detail to be available for statistical treatment which they have not yet received. Death-rates in relation to the number of cases of special forms of disease showing relations of mortality to sex, age, and race are yet to be calculated, and there is material for some good and useful work in this direction.

Within the last twenty-five or fifty years in civilized communities the gross mortality has diminished—there has been a prolongation in the average expectation of life: but how much of this is due to preventive medicine, how much to improved conditions of habitation and to the lowering of the price of food, and how much to improved methods of treatment? Dr. Sweifel endeavored to answer this question in a lecture on the influence of medical knowledge on the life of the people, delivered in Leipzig in 1887 ("Der Einfluss der ärztlichen Thätigkeit auf die Bevölkerungsbewegung").

Taking as a basis for his calculations the figures of Bavaria for ten years, and those of Saxony for thirteen years, he found that for 100,000 of living population the average number of deaths from tuberculosis increased from 250 to 258, from inflammation of the lungs from 222 to 270, from croup and diphtheria from 98 to 123. He remarks that these are saddening figures; in spite of the sanitarians and health resorts, in spite of ventilation, new methods of treatment by inhalation, compressed air, etc., the number of men who die from diseases of the respiratory organs is steadily increasing, and he queries whether Süssmilch was not right in his phrase "Göttlichen Absterbeordnung"—divine law of death.

On the other hand, he shows that the mortality from typhus has fallen from 62 to 34. But the question is, whether this is due to diminished prevalence of the disease, or to a diminished mortality in the same number of cases of the disease due to the improved medical treatment. It may be noted in this connection that the chief effect of improved sanitation appears in the lessened mortality in children under five years of age, and that it is chiefly in the mortality occurring after these ages that we are to look for the influence of improved medical treatment. In examining this, however, it is to be remembered that improved sanitary conditions affecting chiefly infants, by preserving a number of feeble and sickly children tend to produce a higher rate of mortality in succeeding years. In cases admitting of surgical treatment, and in childbirth, there can be no doubt as to the diminished mortality in the practice of

those who use the best accepted modern methods; but these methods are not yet used scientifically by half of the profession, and the results are not perceptible in the general death-rates thus far collected.

It must be admitted that the greater part of the increased expectation of life is probably due to better food, purer water, greater cleanliness, and improved methods of preventing the spread of contagious diseases. If we look at the curves representing the loss of life in large masses of people at different times and places, we see that the laws of life and death have but a narrow range of variation after the age of infancy has passed, and that improvements in therapeutics have lifted the lines but very little. They have lessened suffering greatly, but they have not greatly deferred death.

In our present state of knowledge there are certain forms of disease and derangement of organs whose tendency is to recover without any treatment, or in spite of bad treatment. There are also certain diseases and derangements which are incapable of cure by any known method of treatment. Otherwise, man would not be mortal. Between these two classes is a small number of cases of disease, the result of which depends on the treatment. In order that medical statistics may give us any information in regard to this last class we must have some idea as to the proportion of each of the two other classes.

A very good illustration of some of the ways in which lies can be told with statistics may be found in the various books and papers which have been produced in connection with the anti-vaccination controversy.

In order to understand the relations between vaccination and smallpox, it is necessary to have the death-rates from smallpox given for different periods of life—that is, by age. In this country and in Great Britain we have no data as to the deaths by smallpox by different ages prior to the introduction of vaccination, because the registration of deaths by ages has only been carried on for a little over fifty years. We can, however, for Great Britain, compare the statistics of vaccination for three different periods—the first from 1847 to 1853, in which gratuitous vaccination was provided for the people, but it was purely an optional matter with some whether they should make use of it or not; from 1854 to 1871 vaccination was obligatory by law, but this was mainly theoretical, since the law was practically not enforced; from 1872 to 1880, when the vaccination was rigidly enforced.

Before the introduction of vaccination there were but few persons who did not have the disease at some time in their lives. It appeared in epidemic waves over Europe, usually at intervals of from five to seven years, being about the time required to accumulate, by births, a sufficient amount of susceptible persons to enable an epidemic to make headway. Of course, then, the great majority of persons had the disease in infancy, or in early childhood, and a large proportion of these died. So that in those days the smallpox mortality in the early years of life was high, while those who survived were either protected from future attacks or presented a certain amount of immunity to the poison of the disease, so that the smallpox death-rate of the higher ages was then low. When vaccination came to be general, the young were protected, but were not protected as permanently and completely as would have been effected by an at-

tack of smallpox. The result of this was that the death-rate from smallpox under five years of age fell 80 per cent., while from five to ten years of age it fell 45 per cent., and in the older ages it may even have increased where re-vaccination was not systematically and thoroughly carried out. Taking the English records for 1872 to 1874 and 1877 to 1880, it is found that the proportion of deaths under and over fifteen years of age, per thousand deaths from smallpox, differs according to whether the persons were vaccinated or unvaccinated, as follows: Of 1000 unvaccinated persons dying from smallpox, 672 were under fifteen years of age and 328 over fifteen. Of 1000 vaccinated persons dying from smallpox, 334 were under fifteen and 666 over fifteen, the proportion being, as will be seen, almost precisely reversed under the two conditions.

Whether the data be taken from a State, a large city, or a small town, the results are the same. Take, for example, the records of the town of Kilmarnock, in Scotland. For thirty-six years, from 1728 to 1764, this place had an average population of 4200, and a very accurate register of the births and deaths was kept. During these thirty-six years there were nine epidemics of smallpox, succeeding each other at regular intervals of about four years, just the time required to raise a fresh crop of unprotected victims sufficiently numerous to spread the contagion. Of every 1000 deaths during these thirty-six years, 161 were due to smallpox; in the twenty-six years ending 1879, only 9.9 per 1000 were due to it, or one-sixteenth of the old proportion. In the old days one epidemic left very few unmarked victims for the next one. Those who recovered were pitted for life, and there were very few, except young children, who were unscarred.

By the modern English life-table, of every 1000 children born alive, 2.3 may be expected to die of smallpox before reaching five years of age. In the old of Kilmarnock the proportion was 116 to every 1000.

The statistical mill grinds what is put into it; it enables you to compare the results of different aggregations of circumstances selected by yourself; but it neither guides your selection nor enables you to reason properly on the results. If you compare the death-rate per 1000 of living population in an epidemic of smallpox occurring in a city in the United States in recent times with that of an epidemic occurring in a city in the last century, you will probably find that the death-rate was greater in the modern city than in the ancient one. Perhaps two-thirds of the people in the modern city were properly vaccinated—in the ancient city none were vaccinated. Are we to conclude that partial vaccination increases the death-rate from smallpox? Yes, for a single epidemic year; but if you take a period of twenty years or more for your comparison, you will find the death-rate much lower in the vaccination than in the ante-vaccination period. Why is this? Because in the ante-vaccination period the adults had been through several epidemics of smallpox and had either had the disease and survived, or had proved insusceptible to the virus—being, in either case, protected. The only class of the population in much danger from smallpox in those days were the young children born since the last epidemic, less than ten years ago. But in the modern community, partially protected by vaccination, there

has accumulated a considerable number of unprotected adults during the long periods which now elapse without an outbreak, and these increase the fuel for flame, and consequently the death-rate. Comparisons of smallpox statistics for single years are therefore almost worthless.

The results of vaccination may be indicated in another way. At the commencement of its organization in 1761, the Equitable Society for Insurance of Lives, the oldest and most important of life insurance companies, charged 12½ per cent. extra for all persons who had not had the smallpox. In 1781 this was reduced to 11 per cent. extra.

In 1802 it was resolved "that the directors be empowered to grant policies of assurance upon the same terms to persons who aver in their declaration that they have had the cowpox, as to those who aver in their declaration that they have had the smallpox. But if such person shall die afterward of the *smallpox*, then such policy shall be void." In 1823 the words: "But if such person shall die afterward of the smallpox, then such policy shall be void" were stricken out.

In vital statistics, as in other branches of social science, it is not true that the effects of causes acting in combination are equal to the sum of the effects of each of the causes acting separately. Different causes of death having no relation to each other do not have a joint effect which is equal to the sum of the effects of each cause taken separately, and it is, therefore, difficult to bring the phenomena of vital statistics within the boundaries of mathematical formulæ. In the doctrine of this kind of averages time and number are not convertible terms.

Statistics apply to masses of men, to communities, not individuals. We find a mass of matter moving in a certain direction with a certain velocity and endeavor to calculate the direction and amount of the forces which have produced this result. In like manner we may consider the tendency to death in a community as a resultant of several forces and endeavor to estimate the influence of each of these forces in producing the result.

In studying medical and vital statistics one is somewhat in the position of a man on the deck of a large Atlantic steamer, out of sight of land and gazing on the troubled ocean. He sees many waves, large and small, apparently moving in very different directions, and it is not until he has, by careful examination and repeated comparison, learned to distinguish the ripples due to the wind now blowing, the larger cross seas resulting from forces which were acting a few hours before, and the long rolling swells which indicate to some extent the direction and force of the tempest of yesterday, that he can begin to understand the roll of the ship on which he stands; while to appreciate the force and direction of the great current which is sweeping with it all the troubled water and the ship itself, requires skilled observation with special instruments, and the use of charts which embody the experience of hundreds of voyages. So, also, in viewing the records of human life, diseases and death, the variations which are at first most perceptible are often those which are most superficial and which give little or no indication of the magnitude and direction of the movement of the great masses beneath.

The most valuable sources for data relating to vital statistics, and, in many respects, to medical statistics

also, are those contained in the Reports of the Registrar-General of England for the last forty years, and especially in the supplements which have been issued every ten years during that period. Next to these, for matters relating to this country, come the statistics of the State of Massachusetts for the last forty years, the statistics of New Jersey for the last ten years, the Mortality and Vital Statistics of the Tenth Census, and the statistics of Boston, Philadelphia, New York City, and of the District of Columbia. Especially valuable, also, are the vital statistics of Sweden, of Belgium, of Italy as published for the last six or seven years, of Norway, of Switzerland, of Prussia, and of many of the large cities of Western Europe.

The following works will, also, be found useful for reference:

Süssmilch, J. P.: Die Gottliche Ordnung in den veränderungen des menschlichen Geschlechts, aus der Geburt, dem Tode und der Fortpflanzung desselben erweisen. 2 Thiele. Vierte verbesserte Ausgabe, genau durchgesehen und näher berichtet, von Christian Jacob Baumann. 8vo., Berlin, 1775.

Niles, N., Jr., and Russ, J. D.: Medical Statistics, or a comparative view of the mortality in New York, Philadelphia, Baltimore, and Boston, for a series of years; including comparisons of the mortality of the whites and blacks in the two former cities; and of whites, free blacks, and slaves in Baltimore. 8vo., New York, 1827.

Neison, F. G. P.: Contributions to Vital Statistics, being a development of the rate of mortality and the laws of sickness, from original and extensive data; with an inquiry into the influence of locality, occupations, and habits of life on health; an analytical view of railway accidents; and an investigation into the progress of crime in England and Wales. 3d ed., 4to., London, 1857.

D'Espine, M.: Essai analytique et critique de Statistique mortuaire comparée renfermant les monographies étiologiques des accidents et de la plupart des maladies mortelles, et expliquant les lois générales de la mortalité des peuples par les influences combinées des diverses causes de mort. 8vo., Genève, 1858.

104,440—*Ansell, C., Jr.*: On the rate of mortality at early periods of life, the age at marriage, the number of children at a marriage, the length of a generation, and other statistics of families in the upper and professional classes. 8vo., London, 1874.

Bertillon: La Demographie figurée de la France, ou étude statistique de la population Française, avec tableaux graphiques traduisant les principales conclusions. Mortalité selon l'âge, le sexe, l'état-civil, etc., en chaque département et pour la France entière, comparée aux pays étrangers. Folio, Paris, 1874.

Ollendorff, A.: Die periodischen Sterblichkeits-Schwankungen in ihrer Bedeutung für die medicin. Arch. f. path. Anat., etc., Berl., 1886, cv. 110-128, 1 pl.

Bertillon, Jacques: Article "Demographie" in Encyclopédie d'Hygiène et de Médecine publique. Paris, 1889, 8vo, tome i. p. 112.

In addition to the Census and registration records, we have another important source of information in vital statistics, namely, the records of life and health insurance companies. These are not as well known to physicians generally as they should be, and I wish, therefore, to call special attention to the two most valuable compilations of them now in existence, namely, the *Insurance Cyclopaedia*, commenced by Cornelius Walford, of which five volumes have now been published; and

the *System and Tables of Life Insurance based on the Experience of Thirty American Life Offices*, by Levi W. Meesh, published in 1881.

ORIGINAL ARTICLES.

REPORT OF GYNECOLOGICAL WORK, WITH ESPECIAL REFERENCE TO METHODS.¹

BY R. B. MAURY, M. D.,
OF MEMPHIS, TENN.

THE paper which is here offered presents a brief summary of the more important portion of my operative work during the past year.

In connection with this report some comments are made upon the methods employed, because it is evident that further progress and increased success must depend largely upon the perfection attained in our methods of operating.

With four exceptions all of the operations have been done in a private hospital, built especially for the purpose, and under my own control.

The summary embraces:

21 laparotomies for the removal of ovarian tumors, or of the uterine appendages, or for the relief of obscure disease within the abdomen.

2 laparotomies for ectopic gestation.

28 operations for laceration of the cervix.

14 perineal and vaginal prolapse operations.

5 rectoplasties.

4 anterior colporrhaphies.

The accompanying table presents a synoptical report of the abdominal operations.

Upon many of these cases no comment is necessary; with reference to the others I may properly make some remarks.

It will be observed that out of the twenty-one operations there were two deaths. One of these might be termed accidental; the other was certainly unavoidable.

The one referred to as an accidental death (No. 15) was a case of chronic ovaritis with hyperplasia, and also with extensive cystic degeneration. According to her physician, fearful hemorrhages had repeatedly left her pulseless for many hours. The removal was easy. After the abdominal sutures were introduced some bleeding was discovered, which did not cease upon sponge-packing of the pelvis, or afterward from irrigation with hot water. After examination of the pedicle ligatures, and finding that they were properly tied, a glass drainage-tube was inserted, and the wound closed. A nurse emptied the tube by suction at short intervals.

The patient appearing to be in good condition, I left her for urgent reasons, and on returning in forty-five minutes, I found her pulseless and unconscious.

¹ Read before the Southern Surgical and Gynecological Association, in Nashville, Tenn., Nov. 12, 1889.

LAPAROTOMIES FOR REMOVAL OF OVARIAN TUMORS, DISEASED APPENDAGES, AND FOR OTHER CAUSES.

No.	Name.	Age.	Married or single.	Pathological condition or symptoms.	Operation.	Adhesions.	Drainage.	Hospital or private.	Recovery or death.	Effect of operation.	Remarks.
1	Mrs. L.	53	M.	Papilloma of pelvic peritoneum causing ascites.	Exploration of growth and removal of ascitic fluid.	...	No	H.	R.	Negative.	Returned home and lived one month. The papilloma sprang from the right side of the pelvis; though there were masses on the ovary it did not originate therefrom. Removal was impossible.
2	Miss B.	21	S.	Multilocular ovarian cystoma, weight 40 pounds.	Removal of tumor; remaining ovary healthy.	Yes	No	H.	R.	Complete restoration to health.	Was very feeble and anæmic before operation.
3	Mrs. B.	40	M.	Cancer of small intestine, adherent in Douglas's pouch, causing complete intestinal obstruction.	Exploration and unfolding of intestinal coils.	Yes	No	H.	R.	Clearly to prolong life seven or eight weeks.	History of chronic intestinal obstruction, with acute symptoms of complete obstruction for six days.
4	Miss T.	23	S.	Chronic ovaritis causing complete invalidism.	Removal of uterine appendages	Yes	No	H.	R.	Complete and rapid restoration of flesh and health.	Before the operation she was a mental and physical wreck.
5	Mrs. D.	46	M.	Ovarian monocysts.	Removal of tumor; remaining ovary healthy.	No	No	H.	R.	Complete restoration to health.	
6	Mrs. S.	33	M.	Intra-ligamentous cysts with universal adhesions; a very large tumor.	Removal of cyst after 30 minutes work considered impossible; sac cleansed and drained.	Yes	Yes	H.	R.	Ten months after operation is in very fair health; small fistula 2½ inches deep remains; discharge from fistula small	Six months prior to operation had a long fever, supposed to be typhoid. At time of operation was bed-ridden, and so feeble that she would have died on the table under a prolonged operation. Intestinal adhesions were extensive and firmly organized.
7	Mrs. P.	41	M.	Chronic ovaritis with strong adhesions.	Removal of appendages.	Yes	No	H.	R.	Was bedridden at time of operation, but two months afterward was greatly improved in health.	
8	Miss M'C	19	S.	Ovarian cystoma of grotesque shape filled with gelatinous fluid which would not flow through trocar.	Removal of tumor; remaining ovary healthy	Yes	Yes	H.	R.	Restoration to health slow but complete.	Patient was anæmic and very feeble; tumor weighed 30 lbs.; from character of its contents and firmly organized adhesions requiring ligatures, long incision was made. She had cough for several months after operation, and recovery was slow.
9	Mrs. C.	27	M.	Fever of hectic type for six months following parturition; tumor in left side of abdomen; symptoms supposed due to abscess.	Abdominal section; no abscess found; tumor was a mass of intestinal coils so firmly united as to be inseparable	Yes	No	H.	R.	Gradual improvement in every respect.	Six months afterward her husband wrote that the only remaining trouble was with the bladder.
10	Mrs. B.	24	M.	Chronic ovaritis.	Removal of appendages.	Yes	No	H.	R.	Restoration to health.	Had long been a confirmed invalid; suffered constant pain, and was bed-ridden.
11	Mrs. N.	25	M.	Cystic degeneration of ovaries, with prolonged hemorrhages.	Removal of appendages.	No	No	H.	R.	Restoration to health.	Ovaries were converted into cysts, and scarcely any stroma was left. The results of operation were brilliant.
12	Mrs. J.	38	M.	Large ovarian cystoma; mostly solid, requiring long incision for removal.	Removal of tumor and of other ovary, which was also much diseased.	Yes	Yes	H.	R.	Restoration to health.	Condition was so bad on admission that temporary relief was attempted by aspiration, but only one cyst could be evacuated, and operation was done next day under unfavorable circumstances.
13	Mrs. R.	36	M.	Thin walled ovarian cystoma of grotesque shape; colloid contents.	Removal of tumor and of other ovary, which was also much diseased.	Yes	Yes	H.	R.	Restoration to health.	Tumor had to be shoved through a long incision; cyst was torn in many places, and colloid contents escaped freely into peritoneum.

No.	Name.	Age.	Married or single.	Pathological condition or symptoms.	Operation.	Adhesions.	Drainage.	Hospital or private.	Recovery or death.	Effect of operation.	Remarks.
14	Mrs. K.	41	M.	Cystic degeneration of ovaries with severe and prolonged hemorrhages.	Removal of appendages.	No	No	H.	R.	Restoration to health.	Results of operation were brilliant.
15	Mrs. E.	27	M.	Cystic degeneration of ovaries; severe hemorrhages.	Removal of appendages.	No	Yes	H.	D.	Severe hemorrhage, source of which could not be found; death from peritonitis on fourth day.	Abdomen was reopened one hour after operation; patient pulseless and unconscious. Persulphate of iron injected through drainage tube stopped hemorrhage.
16	Mrs. B.	37	M.	Chronic pelvic peritonitis; pelvic organs so matted together they could not be identified.	Removal of right ovary, which was literally dug out.	Yes	No	H.	R.	Complete relief of all the symptoms; too short a time since operation to say more.	After one hour of hard work the right ovary was enucleated from its bed; left tube and ovary could not be identified; normal and painless menstruation three weeks after. Patient went home apparently in perfect health.
17	Mrs. T.	34	M.	Urachal fistula with umbilical hernia; the fistula which opened at navel was $7\frac{1}{4}$ inches deep.	Division of abdominal wall into the fistula as far as pubes; accidental opening of hernial sac.	H.	R.	Closure of fistula to a great extent; six months afterward a small sinus left which requires washing once in forty-eight hours.	A hernial sac protruded at the navel, and below it on each side of the fistula, in horseshoe shape. This was opened accidentally, first on one side and then on the other, and great care was required to close these openings to prevent the stinking discharge entering the peritoneum.
18	Mrs. L.	42	M.	Pelvic abscess.	Section and drainage of abscess through the abdominal wound.	...	Yes	H.	R.	Abdominal wound healed through-out, full results cannot yet be ascertained since operation was done Oct. 11.	Beneficial results already obtained are, relief from pain caused by abscess in left tube, and removal of obstruction to the rectum, which had almost prevented fecal discharges.
19	Mrs. B.	36	M.	Multilocular thin-walled ovarian cyst with colloid contents and universal adhesions.	Removal of tumor.	Yes	Yes	H.	D.	This was a forlorn hope. Fever for two months; daily vomiting, and bronchitis produced profound anæmia. Patient never reacted well, and died twenty-four hours after operation.
20	Mrs. F.	28	M.	Chronic ovaritis with well-marked salpingitis.	Removal of appendages.	Yes	No	H.	R.	Relief of all symptoms on leaving the hospital; and will probably be completely restored to health.	Had been a great sufferer from constant pain; was bedridden and habituated to the use of opium. She had entirely lost her desire for opium before going home.
21	Mrs. H.	41	M.	Chronic ovaritis; ovaries cirrhotic.	Removal of appendages.	No	No	H.	R.	Two weeks after operation had uninterrupted convalescence.	Operation done ten days before the time for a menstrual period. A Graafian follicle had just burst on the surface of left ovary. The tubes were excessively hyperæmic.

LAPAROTOMIES FOR ECTOPIC GESTATION.

No.	Name.	Age.	Married or single.	Pathological condition or symptoms.	Operation.	Adhesions.	Drainage.	Hospital or private.	Recovery or death.	Effect of operation.	Remarks.
1	Mrs. L.	30	M.	Ruptured tubal pregnancy at tenth week.	Removed foetus and placenta, and tied the tube.	Yes	Yes	P.	D.	Died on third day.	Difficulty of diagnosis, and causes mentioned elsewhere, were the reasons of fatal delay.
2	Mrs. K.	30	M.	Tubal pregnancy at fourth month with extra-peritoneal rupture.	Removed foetus and drained sac.	Yes	Yes	P.	D.	Death from exhaustion.	

The wound was at once reopened, the cavity washed out with hot water, and search again made for the bleeding point, but without success. The drainage-tube was replaced, and the wound again closed.

As the hemorrhage continued, one drachm of liquor ferri tersulphatis was injected through the tube. This at once stopped the bleeding. Reaction with a temperature of 105° F. ensued, and she died on the fourth day from peritonitis. No autopsy was obtained.

I can only speculate in regard to the cause of the hemorrhage; perhaps it was from a torn vein, for the veins in the removed portion of the broad ligament were much dilated.

This case opens the question of the best mode of controlling hemorrhage in a deep cavity like the pelvis, where we cannot see the bleeding point.

I relied on the hemostatic powers of the drainage-tube, but was disappointed. The iron stopped the hemorrhage, but formed a firm plug around the tube, which fixed it firmly in the pelvis. It was removed after forty-eight hours with great difficulty. In a similar case I would be disposed to pack the pelvis around the drainage-tube with iodoform gauze. I have seen Professor Leopold, of Dresden, use gauze alone as a hemostatic, bringing one end out of the lower end of the incision. He removes it in forty-eight hours.

This case, together with Nos. 11 and 14, formed the subject of my paper on the "Clinical History of Cystic Degeneration."¹

The characteristic features of this form of disease, as illustrated by these cases, are profuse and constant leucorrhoea, persistent intractable metrorrhagia, and ovarian pain. The ovaries were almost complete cysts; the stroma was nearly destroyed; and, though menstruation persisted with great regularity, the microscopist could find no evidences of ovulation in the diseased organs.

As there was no tubal disease, and presumably from the subsequent history of Cases 11 and 14, no disease of the endometrium, the conclusion was unavoidable that the severe hemorrhages were the result of cystic degeneration.

The case referred to as one of unavoidable death was No. 19. This was a multilocular, thin-walled ovarian cyst, with colloid contents, and universal adhesions, in an anæmic woman, who was sent to me in desperate circumstances, after all attempts to rally her had failed. She was exhausted by a fever of two months' continuance; by daily vomiting and inability to take food; and, lastly, by an attack of bronchitis, which resulted from exposure at night while waiting four hours for a delayed train.

The operation was done after the bronchitis was

relieved. The cysts which formed the tumor were numerous and small; the walls were fragile, and tore when caught by the forceps; the contents would not flow through the large trocar, and a portion escaped into the abdomen. The adhesions were universal and strong. On the posterior surface of the tumor the small intestine was extensively attached, and upon eight inches of its length it was necessary to leave the outer layer of the cyst wall. The pedicle was tied early in the operation, and subsequently the upper portion of the cyst was removed. This was necessary to get at the intestinal adhesions.

After an hour's work I had the satisfaction of closing a dry and clean peritoneum—but the shock was too great for so feeble a patient. She never fully reacted, and died the next day.

In Case 3 the operation was done for relief of acute symptoms which supervened in the course of chronic intestinal obstruction. For six days neither flatus nor feces had passed. There were pain and constant vomiting. A small nodulated tumor was felt behind the uterus. This was supposed to be a cancerous ovary.

On making the section, it was found that the uterus, ovaries, and tubes were healthy. The tumor was a cancerous growth involving a coil of small intestine and fixing it firmly in Douglas's pouch. Cancerous nodules were found in its mesentery, upon the adjacent omentum, and on the neighboring intestinal coils.

After untwisting the coils and separating a few adhesions, the wound was closed with the expectation that the patient would die in a day or two. But during the night the vomiting ceased, and the next day she began to take food. On the third day there was a natural fecal evacuation, which was repeated at intervals of three or four days.

She went home on the fifteenth day, and lived one month.

Nos. 16 and 18 may be classed among the most difficult of pelvic operations. In the former, after an hour's work the right ovary was dug out of its bed of old adhesions. The vermiform appendix was firmly fixed close to it, but the Fallopian tube could not be made out. On the left side, neither tube nor ovary could be discovered, the tissues being fused together and contracted by inflammation.

In the latter case there had been a history of disease for fourteen years, following parturition. For eight or nine years she had been a great sufferer from pain in the left hip, associated with an exudation fixing the womb in a position of retro-version.

In September she came under my care with a tumor in the left hypogastric region. The pelvic exudation, felt through the vagina, was of stony hardness: a firm ring was formed around the

¹ Transactions of American Gynecological Society, 1889.

rectum which prevented the passage of the index finger, and seriously obstructed defecation.

On making the section, the abdominal wall was found nearly three inches thick, and on the left side very unyielding and resistant from inflammatory thickening of the peritoneum. The omentum was adherent to the pelvic brim, and strong adhesions were broken before the tumor was reached.

After a determined effort of three-quarters of an hour, the tumor was, to a great extent, separated from its posterior attachments, but a cartilaginous button remained, connecting it with the rectum. I could do nothing toward separating the anterior attachments of the tumor. If this had been possible, I would have separated the rectal attachment with scissors, and controlled hemorrhage by the pedicle ligature.

Under these circumstances the sac was aspirated, and nearly two ounces of pus removed. The opening was then enlarged, and the sac and pelvis thoroughly irrigated by means of the siphon-trocar. Two drainage tubes were then inserted, one into the pus sac, the other into the pelvis. The pus sac could not be attached to the abdominal incision. Both drainage-tube openings were closed by the end of the second week.

This method of drainage I had made use of in a previous case under similar circumstances with satisfactory results.

Much uncertainty, however, surrounds the future of both these cases, as it does that of all incomplete operations.

The methods which I have followed with scrupulous care are those which have been developed by the labors of Sir Spencer Wells and his able successors in the Samaritan Hospital, and by Dr. Keith, who worked contemporaneously with him; and, lastly, by Mr. Lawson Tait, who may be said to have well-nigh solved all the problems involved in the successful treatment of inflammatory disease of the uterine appendages, and in the management of ectopic gestation.

These methods may be summarized as follows:

1. An aseptic field of operation, and an aseptic surgeon.
2. A small incision—in the case of inflammatory disease in the pelvis; just large enough to introduce, and work with, two fingers.
3. Aseptic silk ligatures, as fine as is consistent with safety in tying.
4. Enucleation of diseased structures, in spite of firm adhesions or even profuse hemorrhage.
5. Irrigation by means of the siphon-trocar as a substitute in most cases for sponging; using simple hot water for this purpose, and excluding all antiseptics.
6. Drainage often, and whenever one is in doubt as to its necessity.

7. Careful replacement, by spreading out, of the omentum, before proceeding to close the wound.

8. Inclusion of all the structures in passing the abdominal wall sutures; and placing the deep sutures one-half an inch apart.

9. The use of means for moving the bowels on the second or third day, after removing the appendages; and the avoidance, if possible, of opium.

Out of forty-three patients surviving abdominal operations from a few months to several years, I know of but one who has a hernia. This was the result of leaving off her bandage during an attack of dysentery, which occurred two months after a section one inch and a half in length, for an intra-peritoneal hæmatocele.

My cases have all been in private practice. I have heard from most of them repeatedly after operation, and I think if hernia had occurred I would know it.

I have had one tube-sinus which still continues to discharge at times, although one of the pedicle-ligatures was cast out sixteen months after the operation.

I will now consider the cases of ectopic gestation.

The first case was under the care of Dr. W. W. Taylor, who, suspecting ectopic gestation, requested me to see her with him on Feb. 17th. Her history is as follows:

Jewess, aged thirty years, of stout build, who had one child seven years ago. No conception since.

Her health was good and menstruation normal to Dec. 20, 1888, when the menstrual period continued five days.

Six weeks later a slight bloody discharge appeared, accompanied by pain in the hypogastrium and right iliac region. The pain was not continuous: the bloody discharge was a mere stain.

She suffered from nausea, and thought she was pregnant.

An examination showed the uterus to be somewhat enlarged, but in its normal position. Its mobility was impaired and there was decided peri-uterine tenderness, but no pelvic tumor could be found. The pulse was 100; temperature $99\frac{1}{2}^{\circ}$. The patient did not appear to be very ill, and the symptoms, I thought, rather pointed to a normal pregnancy, with slight pelvic peritonitis.

Until the end of the first week in March there was little change; the symptoms were rather better.

There was a continuous bloody discharge, but the pain was less, and at longer intervals.

No membrane or shreds had been, or were subsequently passed.

On March 8th she was suddenly seized, while at stool, with severe pain. Dr. Taylor found her pale, with cool extremities, and feeble pulse.

A hypodermatic of morphine and other means readily brought about reaction.

On the following day we again examined her, and found the uterus fixed, but pushed to the left side by a tumor which occupied Douglas's pouch and the

right side of the pelvis. The diagnosis was now reasonably clear.

I pause in the recital of this history to remark that, at this time, an abdominal section should have been made; but how prone are we to lay to our souls the flattering unction which Schröder thus expressed: "With care, fatal issue is as a rule avoided: the subjects recover with unexpected quickness: the numerous lymphatics of the pelvis quickly absorb the blood."

Dr. Taylor's report says, "Symptoms of mild peritonitis continued; her condition improved; no opium was required, and she was free from pain for a week. Her appetite was better, and all the symptoms favorable. The tumor did not increase in size."

On March 27th she was seized with severe pain: the pulse jumped from 104 to 130, and there was increased peritonitis.

The situation had already been fully explained to the husband; preparations had been fully made for an abdominal section, and this was at once urged. Notwithstanding his foreknowledge, her husband did not give his consent to the operation until March 30th.

The patient's condition was then very unfavorable; the abdomen was swollen, the skin had assumed a deep icteroid hue, and the pulse was very feeble. The abdomen was opened with the assistance of Drs. Taylor and R. W. Mitchell.

A large amount of clots and dark, bloody serum was found, with a ruptured Fallopian pregnancy of about the tenth week, the fetus being discovered alongside the right tube.

After removal of all these and ligation of the tube, the abdomen was irrigated with hot water and a drainage-tube inserted.

Though she bore the operation well, and was put to bed with a pulse of 104, the patient did not improve.

There was much discharge of dark fluid from the tube; the color of the skin deepened; the pulse increased in frequency; she became delirious, and died on the third day.

CASE II.—Mrs. K., aged thirty years. Had one child eight years ago. No conception since.

Her health was good and menstruation regular up to the 15th of May, 1889. About the middle of June there was a slight "show." Soon after this she began to have nausea, and concluded that she was pregnant.

On the night of July 19th there was a discharge of blood lasting for several hours, and unattended with pain.

On August 12th, and several times afterward, there was a slight bloody discharge.

About the last of July symptoms of peritonitis appeared; the abdomen swelled, was tympanitic and very tender on pressure. Pain was also complained of, oftentimes severe enough to require morphine. There was a slight rise of temperature and pulse.

The vomiting which began after the 15th June continued. On the 15th of September, when first seen, she was emaciated and feeble from inability to take food and from long suffering. She was confined to bed, and required an opiate nearly every day. The pulse was 90; temperature 99°. The entire abdomen was swollen, very tender to the touch, and tympanitic except over the lower portion, where an ovoid tumor was observed rising from the pelvis as high as the navel, and lying chiefly to the right of the median line. The tumor was dull on percussion, and no fluctuation was perceptible.

A vaginal examination showed that the uterus was pushed to the left side, its fundus lying forward, and the cervix directed toward the left sacro-iliac symphysis. It was fixed in this position by a tumor which occupied the middle and right side of the pelvis, which was evidently a part of the uterus and also of the abdominal swelling. The uterine sound entered three and one-fourth inches. Its withdrawal was followed by a bloody discharge. The cervix was swollen, soft and patulous, and all the tissues were unusually succulent. The purple hue of the vagina so often present in pregnancy was absent, and no mammary signs of pregnancy were detected.

I at once made the diagnosis of a four months' tubal pregnancy, with rupture between the layers of the broad ligament.

It was evident to me, and to Dr. Edward Mitchell, who saw her with me, that the patient could not live to the end of the nine months. Her only chance was in immediate operation, and the gravity of the case was at once explained to her husband.

With a view of diminishing the vascularity of the sac, and thereby lessening the dangers of laparotomy, I proposed to destroy the fetus by electricity, and remove it after a week or two. A Gaiffe battery was used the next day, and again on the day after. Strong uterine pains followed this treatment, and a complete decidual mass as thick as the index finger was expelled. The battery was not used again, and as it was evident that the patient was losing ground, laparotomy was done on September 20th.

On opening the abdomen a dark tumor appeared, with uneven surface. It filled the pelvis, and rose to the umbilicus.

Very nearly in the line of the incision was an ovoidal prominence which did not fluctuate. Believing it to be the foetal sac, I passed a very small trocar in to remove the fluid, but nothing escaped through the canula. After moving the canula in several directions, a bloody stream issued from it. On withdrawing the canula the delicate sac ruptured to the extent of allowing the extrusion of a four months' male fetus.

There was quite a free flow of blood from the sac, but it was promptly stopped by packing with iodoform gauze.

The edges of the sac were then stitched to the abdominal incision. I was desirous of avoiding drainage in this case, and of leaving the placenta, as Mr. Tait has recommended, by filling the sac with water and afterward closing it so as to exclude the air; but the accidental injury to its wall causing

bleeding, made it necessary to drain, and the gauze was relied on for this purpose.

After this operation the abdomen, much distended, was not appreciably diminished in size, and the upper sutures were tied with considerable tension.

The patient's condition was not improved: she was much exhausted, and was restless. The next day her pulse was 96, and temperature 99°. There was much watery discharge from the sac. Hiccup became a troublesome symptom. On the third day the stomach was quiet, and temperature normal, but the pulse had risen to 115. On the evening of the fourth day she died, apparently from exhaustion.

Autopsy: The edges of the sac were firmly adherent to the abdominal wall. The placenta was attached to the left wall of the sac. The large tumor rising to the umbilicus was found to be almost entirely a hæmatoma, between the layers of the right broad ligament, which had detached the peritoneum from the right and posterior walls of the pelvis, and partially from the posterior surface of the uterus.

The tumor was composed of large masses of fibrin, much black coagulum, and a good deal of fluid blood.

Could such a mass be disposed of except by supuration? The mass after removal, draining of liquid, and exclusion of coagula, was larger than a child's head.

Could it have been enucleated and tied off? The hemorrhage and shock would probably have destroyed the patient on the table.

The peritoneum was clean. There were no adhesions, but the intestines were distended as before the operation.

The foetal sac occupied an insignificant part of the tumor. The foetus had been dead a few days only.

I have previously reported two cases of ectopic gestation in my own practice, one of which ruptured at eight weeks, and recovered without operation. The second was operated on six months after completion of the natural term of pregnancy. The latter patient was far advanced in phthisis, and the operation was done at her request. She recovered from the operation, but died a month later from lung disease—both apices showing cavities at the autopsy. This autopsy demonstrated beyond all doubt that the foetal sac was entirely extra-peritoneal; that the gestation had originated in the right Fallopian tube, and had developed between the layers of the broad ligament, downward to the pelvic floor, laterally to the pelvic wall, and upward into the abdomen.

The case is of unusual interest, because, next to Berry Hart's celebrated frozen section, it was the first published to demonstrate an extra-peritoneal abdominal gestation. With this experience, and after much thought and study of the subject, I have but little confidence in my own ability to diagnose

ectopic gestation in the early months, before the period of rupture.

Of the twenty-eight operations for the repair of lacerated cervix, all were successful, and in no case was there fever or other complication. In one case I availed myself of a suggestion made by Dr. Bache Emmet—to operate first on but one side, and several weeks later, when involution has proceeded somewhat, to close the rent in the other.

Emmet and Schatz, on the same day of the month, and in the same year, 1883, the one in Philadelphia, the other in Freiburg, read papers before societies on injury to the pelvic floor in childbirth.

Each pointed out how displacements of the pelvic viscera, and especially prolapse, were dependent much more on such injuries than upon a laceration of the perineum. One regarded the injury as an overstretching and separation from the attachments of the pelvic fascia. The other considered it to be a laceration of the fibres of the levator ani, close to their insertion into the descending ramus of the pubes.

Subsequently Hadra, as a result of his careful and intelligent study of the subject, was satisfied that there was a true diastasis, near their sacral attachments, of the levators, and a retirement of the muscular strata toward the pubic insertion.

While this anatomical discrepancy of opinion still exists, and we are yet in ignorance of the exact nature of the injury, a decided modification of our methods has resulted, and the operations which I have been doing since Emmet's paper was published have had for their object a restoration of the support which is afforded by the pelvic floor rather than a simple restoration of the perineum proper.

In most of my cases the operation performed has been that which Emmet has described for "Prolapse of the Posterior Wall of the Vagina," and the results which I have obtained by this method have been eminently satisfactory.

In a few cases during the past year I have done Martin's operation, which is particularly appropriate when there is great relaxation of the vagina.

I may here remark that Martin's operation consists really of two operations, the first being a double elytrorrhaphy, the denudations being on each side of the columna rugarum posterior, while the second has for its object the building up of the perineum. In the second the denudation is almost identical with that of Emmet, while the suturing of one is quite different from that of the other.

In my table of operations there are five rectoplasties and four anterior colporrhaphies. These have been done according to Martin's method. This method is so simple and possesses so many merits that I can strongly commend it. It would be improper in this place to go into details which

have been published elsewhere (*American Journal of Obstetrics*, October, 1887), but I may say that the peculiar features of the method are the following:

The denudation, whether it be on the posterior or anterior wall, is done with the knife, the mucous and connective tissue layers being removed so as to expose the wall of unstriated muscular fibre.

A single continuous suture of catgut closes the wound, beginning at its upper angle, working downward, and, if it be on the posterior wall, including the rent in the rectum, and finally, closing the perineum.

Suturing in layers relieves tension, brings about union over a large extent of raw surface, and avoids the formation of pockets.

The method is to be commended for its extreme simplicity, the rapidity with which it can be done, the great comfort to the patient afterward, and because there are no sutures to be removed. One requirement for its successful performance, I am sure, is good catgut.

Without intending to make invidious comparisons, I may say that the raw catgut which Martin himself prepares, Nos. 2 and 3, known by the trademark "Wiesener," and made by Paul Hartman, of Heidenheim, and to be easily and very cheaply bought in any of the German cities, comes very near to perfection as a ligature.

This catgut I have prepared by Martin's formula, immersing it for six hours in a sublimate solution, 1 to 1000, then removing and drying it with a towel, and, lastly, immersing it in a mixture of oil of juniper and alcohol, one to two.

After a week's immersion it is ready for use, and is then a perfect ligature—as flexible as silk, exceedingly tough, and does not disappear from the tissues under seven days.

Of the five rectoplasties, all united most satisfactorily, and were complete successes. There was perfect retention of feces and gases. In but one of the cases was there cause for anxiety. In this the operation was done to close a large recto-vaginal fistula of eighteen years' standing, in a woman who was several years past the menopause, and whose general health was completely wrecked from long residence in a tropical climate, and from incessant headaches, which required the use of opium.

Through the fistula a large hemorrhoid frequently protruded in a half-strangulated condition; therefore, an operation for hemorrhoids was first required. Subsequently the recto-vaginal septum was divided to the fistula, the upper margin of which was one and one-half inches from the anus. The edges of the fistula were pared, and the lateral folds of the vagina denuded. The entire wound-surface was then closed by the continuous catgut suture in tiers. A small fistula remained, but three months

later the patient came to show me that a complete success had been accomplished, the minute opening having closed. The extreme thinness of the septum, and the abundance of cicatricial tissue near the fistula, made a successful result very improbable. In this operation of Martin for complete rupture of the perineum into the rectum, as in that of Bantock and others, no attempt is made to recover and suture the ends of the ruptured sphincter.

Emmet thinks that freshening the edges of the muscle, and bringing them into perfect apposition, are necessary.

It is difficult to prove that the atrophied fibres of the sphincter in an old laceration are ever recovered, and if they were, the union of the ends would not be muscular, but only by connective tissue. While discussing the repair of muscle in wounds, Mr. Thomas Bryant states that his observations "confirm those of Billroth, who declares that he has never seen anything which he could regard as a reformation of muscular fibres, and that the cicatrix in muscle is almost entirely connective tissue, the extremities of the muscular fibres after division and repair uniting with the cicatricial tissue in the same way as they do with the tendons." (*Internat. Cyclopedia of Surgery*, vol. ii.)

The four anterior colporrhaphies were for very extensive prolapse, and in each the denudation extended from the meatus urinarius to the cervix uteri. They were satisfactory in every respect.

During all the plastic operations herein discussed the field was irrigated by a gentle stream of pure warm water, and the wound thereby made aseptic.

After operation the only need for opium is to control the bowels, which in the rectoplasties are not allowed to move until the fifth day. Subsequently they are moved every two or three days.

No vaginal douches are used; merely irrigation of the external genitals after urination.

The rectal tube is of immense value after rectoplastic operations.

In the work herein submitted, I may state that there has been nothing like sepsis in a single case.

NOTE.—In rectoplasties, fearing a possible solution and giving way of the catgut before union is obtained, I have as a precaution passed a special suture of silkworm-gut at the anal margin through the ends of the sphincter. I think the benefit from the suture, to which Emmet attaches so much importance, is not in procuring union of the sphincter, but in holding the ends of the sphincter quiet, and thus preventing their contractions from interfering with union.

A French Hospital in Turkey.—The *Press and Circular* states that a hospital and dispensary will be established at Constantinople at a cost of about \$800,000, the appropriation to be chiefly obtained from legacies.

ASTHMA AS A NEUROSIS.

By J. G. CARPENTER, M.D.,
OF STANFORD, KY.

"ASTHMA is an affection characterized by severe paroxysmal dyspnoea, recurring at more or less marked intervals, generally in the night, the dyspnoea being due to spasmodic contractions of the bronchi, produced by a variety of causes."—*Quain's Dictionary of Medicine*.

"Asthma may be defined as dyspnoea of a peculiar urgency and violence, generally paroxysmal and recurrent; often periodic; not necessarily attended by cough or expectoration; accompanied usually by dry râles, and compatible with easy and healthful respiration in the intervals of the attacks."—*Reynolds's System of Medicine*.

"A violent form of paroxysmal dyspnoea, not dependent upon structural lesion; with great prolongation of the respiration, and with absence of all symptoms of the disease during the intervals between the attacks. Its synonyms are *asthma convulsionum* (Willis); *spasmus bronchialis* (Rombert, *asthma nervosum* or *Krampf der Bronchien*)."—*Pepper's System of Medicine*, Beimer.

A most zealous advocate of the spasm theory of asthma as a neurosis depending upon tonic spasm of the bronchial muscles, and caused by faulty innervation of the pneumogastric nerve, "claims that this theory is confirmed by clinical experience; and that the suddenness with which the attack comes on and disappears, the long and forced respiration, with the sibilant râles, and other evidences of stenosis which accompany it, admit of no other explanation." As a proof of this, spraying the rhinopharyngo-laryngeal chambers with cocaine, the internal free use of chloral or the hypodermic injection of morphine, or the latter with atropine, inhalation of ether or chloroform, or the relaxing effect of ipecac, antimony, or apomorphia, by nausea, causes the immediate disappearance of the paroxysm and the concomitant symptoms. The absence of morbid anatomy to indicate the specificity of asthma, the suddenness of its coming and going, the intervals of repose, the enjoyment of perfect health at these periods, explain its neurotic origin.

Lebert considers that bronchial spasm is an all-important factor, but denies that it is in itself sufficient to account for the sudden and enormous inflation of the lungs observed in this disease. He doubts the possibility of a valvular closure of the bronchi, but believes that the bronchial spasm, which he regards as primary, causes secondary contraction of the diaphragm and inspiratory muscles of the neck and chest.

Theodore Weber discards the above theories because neither bronchial spasm nor contraction of

the diaphragm explains why catarrhal secretion should appear at the close of an attack in which at the commencement there was no catarrh. He attributes the phenomena of asthma to sudden swelling of the bronchial mucous membrane, the result of dilatation of the bloodvessels, produced through the agency of the vaso-motor nerves, thus reviving the fluxionary theory of Traube.

To prove this theory Van Loven's experiments are cited, which prove that irritation of the sensory nerves is followed by the reflex engorgement of the territory to which they are distributed.

Weber considers that this engorgement of the bronchial mucous membrane is somewhat similar to the acute swelling and stoppage of the nostrils to which many persons are subjected—a closure which does not last longer than a few moments, and which is attended with increased redness and swelling of the Schneiderian membrane. The mucous membrane of the nostril and that of the bronchi being both parts of the respiratory tract and somewhat similar in structure, he concludes that the process in the nostril is analogous to that which occurs in the bronchi during the asthmatic paroxysm. He cites the fact that such occlusion of the nostril is often the precursor of the asthmatic attack, and in some cases continues throughout.

Max Schaeffer maintains that asthma is due to bronchial fluxion as advocated by Weber, but claims that hyperæmia is followed by spasm of bronchial muscles, the former being primary, the latter secondary. Reid, with the most recent writers, believes that asthmatic attacks are due to pathological conditions in and about the upper air passages, such as naso-pharyngeal and laryngo-tracheal catarrh, polypi, hypertrophies of turbinated processes, tonsils, both facial and pharyngeal, or one or both, and enlarged cervical glands. The writer believes that deviated septa, nasal occlusions, diseases of the antrum, maxillæ, decayed teeth, and impacted cerumen in the auditory canal, all act as irritants, and, the irritation being transmitted through adjacent nerves to the organs involved, causes bronchial spasm.

Pathological Anatomy.—Bronchial asthma is purely a neurosis. No ante- or post-mortem anatomical lesions are found to indicate a condition peculiar to asthma. The most that can be said (pathologically) is that there are certain functional disturbances which disappear with as much certainty and rapidity as they appear, and that asthma is, as a rule, but the sequel of some lesion in the upper respiratory tract as a predisposing cause, followed by an acute or sub-acute catarrh of the upper air-passages as an exciting cause—either a rhinitis, rhino-pharyngitis, ethmoiditis, sphenoiditis, or frontal inflammation.

There may be present only the dry or congestive stage of acute catarrh, the liquefactive or the mucopurulent stage, or there may be irritation of the

mucous membrane and nerves supplying it, of the upper respiratory tract. The quieting of this irritation, the arrest of the acute catarrh in one or more of its stages, checks and cures the asthma temporarily. The cure of any chronic catarrh of the upper air-passages, removal of myxomata, fibromata, turbinated hypertrophies, nasal occlusions—as enchondromata, exostoses, spurs and ridges on the septum, deviations of the septum, diseases of the antrum, and decayed teeth—prevent the return of the disease.

In some cases irritation from tumors in the abdominal cavity, hepatic or gastro-intestinal irritation may be transferred to the pneumogastric nerve, and cause bronchial spasm. In cases of long standing, owing to often-repeated attacks of asthma, the air-cells may become permanently distended, attenuated and ruptured; emphysema may result, or the pathological lesions of chronic bronchial catarrh and its accompaniments in the upper respiratory tract may be found on making a post-mortem examination.

Hyper-distention of the alveoli and impaired circulation of the blood by repeated attacks of asthma will also produce cardiac disease.

The dyspnoea of bronchitis, cardiac disease, emphysema, spasm of the glottis, oedema of the glottis, tracheal stenosis, spasm of the diaphragm, paralysis of the posterior crico-arytenoid muscles, and embolism of one of the middle or larger pulmonary arteries, should not be mistaken for asthma. The asthma attending hay-fever will not be discussed in this paper, further than to state that the predisposing etiological factors which cause asthma have also been found in hay-fever, viz., diseases located in the upper respiratory tract, and that the medical, surgical, hygienic, and climatological factors which relieve and cure asthma have also cured this troublesome malady.

Rheumatism and gout play an important rôle in asthma, and during sudden changes of weather or temperature, asthma, bronchitis, or some skin eruption, may appear in the absence of a rheumatic or gouty attack. Uræmia, from diseases of the kidneys, may cause the most severe attacks of asthma.

The most constant change observed in the bronchial tubes in old cases of asthma is hypertrophy of their muscular fibres, causing thickening of their walls and diminished calibre. In other cases they are dilated, but this condition is due rather to the concomitant bronchial catarrh than to the asthma. The venous blood, obstructed in its course through the lungs, accumulates in the pulmonary artery, and, pressing back upon the right ventricle, excites it to increased action, which, in the course of time, leads to hypertrophy of its muscular fibres and dilatation of its cavity. Syphilis, lead and mercurial poisoning, may cause asthmatic attacks through irritation of the medulla oblongata or through the pneumo-

gastric nerve, in the same manner as does rheumatism, gout, uræmia, or malaria.

Malarial asthma, while not so common as malarial neuralgia, does often exist, and is relieved and cured by anti-malarial treatment.

Some of the most distressing cases of asthma the writer ever witnessed were due to a retroversion of the uterus and pressure on the sacral nerves. The treatment in these cases consisted in the use of large hypodermic injections of morphine and atropine to allay the paroxysms, while further attacks were prevented by replacement of the womb and the adjustment of a suitable pessary.

Various authors claim that asthma is inherited and even give examples where the father and three or four children had asthma, and where the disease appeared in four generations; or one generation may have had asthma; the next, gout or rheumatism; the third, epilepsy; and the fourth, asthma.

The writer of this paper doubts the heredity of asthma, but believes that a neurotic diathesis is inherited, and that from certain predisposing and exciting causes asthma would be caused in one case, epilepsy in another, and St. Vitus's dance in a third.

Riegl states that the action of the irritant in asthma may be explained in one of three ways: (1) Both the spasm and congestion may be the common result of the irritant; (2) the catarrh may cause the spasm; or (3) the spasm may, secondarily, cause the catarrh.

Most cases of asthma occur in childhood: from one to ten years, 71 cases; ten to twenty years, 30 cases; twenty to thirty years, 39 cases; thirty to forty years, 44 cases; forty to fifty years, 24 cases; fifty to sixty years, 12 cases. (Salter.)

The reason that asthma is so much more prevalent in childhood is, to the author's mind, due to the improper management of the child at birth; even in half an hour after its advent, a rhinitis is developed from undue exposure and the rapid evaporation from the body and radiation of heat: the child starts in life with a cold, has continual recurrences, thereby establishing chronic or subacute catarrhal inflammation of the upper air-passages, which with its sequelæ furnishes the most potent predisposition to asthma. The prognosis is good if the proper treatment is given before irreparable structural lesions have taken place. The patient starts wrong, and goes wrong until he falls into the hands of the rhinologist, and, as a rule, in due time is cured, for as asthma is a neurosis, the removal of the cause removes the effect.

Children and adolescents recover with proper treatment more rapidly than adults.

Persons of rheumatic, gouty, or phthisical diathesis do not recover so rapidly.

Dr. F. H. Bosworth (*The American Journal of the Medical Sciences*, September, 1888) reports an analysis of eighty cases of asthma, with special reference to local diseases of the upper air-tract, and concludes that asthma is a reflex disease. He divides asthma into hay-asthma and perennial asthma, the former being a vaso-motor rhinitis, the latter a vaso-motor bronchitis, and believes that they are virtually one and the same disease, the paroxysms being excited by atmospheric conditions.

Hay-fever depends on three conditions: 1. A neurotic habit, as shown by Beard. 2. The presence of pollen. 3. A disordered condition of nasal passages.

Asthma depends on three conditions: 1. Neurotic habit, as shown by Salter. 2. Disease of nasal mucous membrane. 3. Obscure conditions of the atmosphere.

According to Bosworth, a large majority, if not all, cases of asthma are dependent upon some obstructive lesion in the nasal cavity. This is proved by the relief furnished by local application of cocaine, and by the permanent relief of so many cases by removal of the obstruction in the upper air-passages. Thirty-four of Dr. Bosworth's 80 cases of asthma had hay-asthma; 46 had perennial asthma; 29 of the cases of hay-asthma and 33 of perennial asthma had nasal symptoms preceding the attack; 60 of the cases were ushered in by sneezing and other nasal symptoms; 84 gave a history of catarrhal trouble. Of the 34 cases of hay-asthma, when examined as to local condition in the nose, 9 had hypertrophic rhinitis, 12 had hypertrophic rhinitis and deflected septum, 4 polypi, 5 polypi and deflected septum, 3 deflected septum, and 1 had elongated uvula.

Of the 46 cases of perennial asthma, 13 had hypertrophic rhinitis, 11 nasal polypi, 11 hypertrophic rhinitis and deflected septum, 6 polypi and deflected septum, 2 adenitis and hypertrophic rhinitis; thus showing that all of the 80 cases of asthma examined as to the condition of the nose presented some obstructive lesion. The treatment in these 80 cases was the use of caustic, the nasal saw, and the snare. In the hay-asthma cases 18 were cured, 14 improved, 1 unimproved, 1 result unknown. In the cases of perennial asthma 28 were cured, 12 improved, 2 unimproved, and 4 unknown.

The writer has had under observation between 20 and 30 cases of asthma, and can confirm the tabulated analysis of Dr. Bosworth. In fact, the above statements are the uniform experience and observation of all practical rhinologists.

The statistics of Salter show that persons from one to ten years of age are subject to asthma. This, no doubt, is due to the facts that in addition to the improper and unhygienic treatment given the infant at its birth, producing a chronic or subacute rhinitis,

scarlatina, measles, whooping-cough, diphtheria, and roseola, bring about the most favorable predisposing causes of asthma, viz., diseases of the upper air-tract. Beside the conditions just enumerated may be mentioned improper dress, the follies of fashion, the use of tobacco, alcoholic beverages, snuff, and certain occupations—such as milling, cigar-making, blacksmithing and hemp-breaking.

A lady, aged twenty-six years, mother of two children, eight weeks after her second confinement consulted the writer. She had chronic naso-pharyngitis, subinvolution of the uterus, anal fissures, and spasm of the sphincter ani, and had been subject of late to asthmatic attacks. Divulsion of the sphincter ani, the curing of the subinvolution of the uterus and the catarrhal inflammation of the upper air-passages prevented a return of the asthma, proving conclusively that in this case the asthma was a neurosis. There was no permanent relief until after divulsion.

One of the most distressing forms of asthma is uræmic asthma. In the treatment of this variety, there are three indications: 1. To eliminate from the system the poison already present. 2. To prevent its deleterious effect upon the nerve centres and terminal nerves. 3. To prevent the further or excessive formation of urea. The first is done by the hot air bath, hot water and steam bath, or pilocarpine causing copious diaphoresis, by digitalis and acetate of potash, frequent draughts of hot water, and washing out the kidneys and urinary tract by free diuresis. Also by the elimination of waste products by hydragogue cathartics. The second indication is met by the effects of morphine on the terminal nerves and on the nerve centres. The third indication is to circumscribe the diet, feeding the patient on milk, and preventing the formation and absorption of further poisons. Dr. Stephen Mackenzie in the *London Lancet*, states: "I think all the facts of uræmic dyspnoea, its periodicity, sudden onset, and relief by anti-spasmodics, point to a spasmodic neurosis due to poisoning of the nerve centres, and suggests that the spasm is rather of the bloodvessels than of the bronchial tubes. Beside the hypodermic use of morphine in renal asthma, the author has seen the happiest results in cases of uræmic convulsions and coma. The following case is an example of this:

Patient, a female about twenty years of age, had been comatose twelve hours or more, and had had from one to three convulsions every hour. The case had been diagnosed "hysterical coma and convulsions." One-fourth grain of morphine was given hypodermically, and the convulsions lessened; in two hours another fourth of a grain was given, and in an hour the convulsions had ceased. In two hours from the administration of the last dose, another was given. An hour afterward patient was partially conscious, and in three hours was entirely

conscious, thoroughly herself and talked freely. The pupils had contracted to the normal size, pulse was full, strong and regular, respiration and temperature normal. With every dose of morphine thirty drops of tincture of digitalis were given.

To Professor Loomis, of the Medical Department of the University of the City of New York, the profession is indebted for the use of morphine as an antidote to uræmic poison. He states that when premonitory symptoms of acute uræmia were found, as well as during the active manifestation of uræmic intoxication, so far as he is able to judge, its administration has been uniformly followed by good results. In no instance is he aware that he has caused a fatal narcotism. Dr. Loomis has given from one-half to one grain injections to a patient in complete coma. He claims positive relief of distressing and dangerous symptoms and in addition: (1) to arrest muscular spasm by counteracting the effects of the uræmic poison on the nerve centres; (2) to establish free diaphoresis; (3) to facilitate the action of cathartics and diuretics, more especially the diuretic action of digitalis. To the expert diagnostician in renal as in other asthmas, morphine is a therapeutic remedy of the highest value. The writer believes it has a specific effect, as has also belladonna, on the sphenopalatine ganglion.

The sphenopalatine ganglion supplies branches to the nose, throat, soft palate, and Eustachian tube. It possesses a sensory, a motor, and a sympathetic root. It is connected with the pneumogastric and facial nerves, and through its numerous connections an intimate sympathetic relation is established between the throat, nose, ear, larynx, and bronchial tubes. Removal of this ganglion causes a severe catarrhal condition of the nasal mucous membrane. This membrane is continuous with that which lines the eyelids and nasal duct, the throat, Eustachian tubes, the middle ear, larynx, trachea, and bronchial tubes. An irritation or congestion started in the nasal chambers may extend reflexly to the pneumogastric nerve, and cause asthma by bronchial spasm, or the irritation may be so great as to cause, in addition to asthma, acute or subacute catarrhal inflammation of the upper air-passages and bronchial tubes. Opium and its preparations and belladonna have a specific effect in allaying irritation and checking inflammation and secretion in the upper air-passages by acting on the nerve centres, and are highly important not only during paroxysms of asthma, but in the intervals to assist local treatment in allaying chronic irritations and congestions. In connection with quinine and nuxvomica they exert a powerful tonic influence on the vaso-motor nervous system. Given in tonic doses three times a day, they prevent the return of the asthma, while the intra-nasal disease is being cured locally. They

also prevent acute and subacute catarrhal inflammation in the upper air-passages.

The majority of cases of asthma that I have seen were affected with nasal disease, especially chronic naso-pharyngitis and hypertrophic rhinitis.

Nitroglycerin has an important place in the treatment of the paroxysm and during the intervals, through its effects on the vaso-motor nervous system, the tablets being administered every three to six hours. Chloral hydrate has a decided action in allaying the attacks of asthma. When the paroxysms are very violent and threaten life, chloroform by inhalation is indicated, and proves helpful. In asthma attended by bronchitis and laryngitis, the fluid extract of *Grindelia robusta*, paregoric, and syrup of *Yerba santa*, equal parts, every two, four, or six hours, has proven valuable, but at some future time the asthma returns.

Wine of antimony, or ipecac with paregoric, and fluid extract of *Grindelia robusta*, equal parts, to check and prevent a return of the asthmatic paroxysm has proven a valuable prescription in my hands.

Where there is present a malarial, rheumatic, gouty, or a syphilitic dyscrasia, or mercurial or lead poisoning, the appropriate constitutional treatment for these affections must be given during the intervals of repose. Any gastro-intestinal or hepatic irritation must have its appropriate form of treatment.

As in most asthmatics the general health is impaired, especially in those who have had long-standing chronic intra-nasal irritation and disease, there is an innervation of the vaso-motor nervous system attended with marked anæmia and neurasthenia that demands for its amelioration iron, quinine, strychnia, phosphorus, and electricity.

With three of my patients chromic acid applied to the turbinated processes has checked the paroxysm of asthma almost instantly, and without the previous use of cocaine locally. In one of these cases it was applied to the inferior and middle turbinates (a hay-fever patient); in bronchial asthma, twice to the middle turbinates, and once to the superior turbinated processes.

The local treatment consists in treating intra-nasal diseases. For chronic rhino-pharyngitis, or the latter and laryngo-tracheitis, a two or four per cent. solution of muriate of cocaine is sprayed into the upper air-passages, followed by soothing, non-irritant, mild, astringent, antiseptic, and protective medicines, vaseline being the base, in the form of a spray, every day or every other day *pro re nata*—using it either with DeVilbiss's or Rumbold's spray-producers. Where hypertrophic rhinitis or intra-nasal myxomata, or fibromata, enchondromata, septal spurs or ridges, deflected septums, or foreign

bodies lodged within the nose exist, chromic acid, the snare, galvano-cautery, nasal drill, burrs, forceps, saw or punch should be used in addition to the medical treatment to effect a cure. The vaseline and cocaine spray with some antiseptic should be used after an intra-nasal operation to protect the lesions and tissues, prevent congestion, and render the parts and secretions aseptic. Besides numbing the tissues with cocaine, spiritus frumenti taken internally half an hour before operation, one or two ounces every five minutes, enough to cause partial anæsthesia or intoxication without unconsciousness, has proven a most valuable anæsthetic, and in intra-nasal surgery is to be preferred to chloroform or ether. It can be used with or without cocaine locally; should too much of the latter be used, whiskey would be prophylactic against poisoning.

This paper would be incomplete should injunctions of vaseline and the systematic daily use of massage be omitted.

Concerning the climatic treatment of asthma these facts have been observed, viz.: that asthmatics with chronic rhinitis, hypertrophic, or rhino-pharyngitis, attended with copious secretion, do best in a dry, high, warm, attenuated atmosphere. Those with atrophic rhinitis do best in a moist, warm atmosphere of low altitude. Asthmatics with a mixed form of rhinitis, viz., the hypertrophic and atrophic combined, do best in a warm, moist, low atmosphere, or a high, warm, dry locality, depending upon the predominance of the former or latter variety of disease. Patients have found great relief from asthma and intra-nasal disease by a sojourn in Texas about San Antonio; Orlando, Florida; Thomasville, Ga.; New Mexico, and Southern California—in fact, claim to be well, entirely unconscious of any nasal irritation or disease. One patient claims the dry, dusty atmosphere of Colorado aggravated and increased the nasal disease and made the paroxysms of asthma more violent and their recurrence much oftener. Another patient was entirely free from asthma so long as he lived at Louisville, Ky., but has recurrences on going to the country and remaining a few days.

**ON CALF-PEPSIN, AND ESPECIALLY THE
GLYCERITE OF CALF-PEPSIN, AS AN
ADJUNCT TO A MILK-DIET.¹**

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FOR a number of years, in treating cases of apepsia in infancy and as an adjunct to a milk-diet at a later period of life, I frequently used rennet-wine, which was acceptable to the patient and which, I believed,

had some peptonizing power. I also occasionally met with a communication in the medical journals reporting favorably upon its employment in the digestive disorders of infants. The experiments of Scheffer, published in 1870, in the *American Journal of Pharmacy*, however, demonstrated very conclusively the fact that an alcoholic menstruum was not suited to the preservation of digestive power in a pepsin preparation, and that glycerin diluted with water was the best of all menstrua for this purpose. Last winter, in conversation with Mr. Llewellyn (successor to Hubbell & McKelway), who has had considerable experience in the manufacture of the wine of rennet, I suggested that a solution made with glycerin would be more acceptable, and would prove to be a more active digestive agent than the alcoholic preparations. After several consultations and experiments, we produced this Glyceritum Pepsini Vitulini. The method followed in its manufacture is as follows: The stomachs of healthy young calves are washed clean with running water, the mucous membrane is dissected off, crushed, and treated with glycerin and slightly acidulated water, in which it remains until the pepsin is all extracted; the solution is then filtered carefully, and to it is added a small proportion of the acid phosphate of lime. This was considered a useful addition, because cow's milk is slightly deficient in this constituent as compared with breast-milk, and in order to insure a faintly acid reaction to the finished product. Scheffer found, in the experiments already referred to, that calf-pepsin requires the presence of an acid medium to enable it to exert any digestive action upon albumen.

As milk is increasing in favor, not only as an easily obtained and easily assimilated form of nourishment, but also as a therapeutic agent of no mean value, in inveterate indigestion, in gastric ulcer, diabetes, renal disease, typhoid fever, inanition, as an important part of the rest-cure, and in the perennial baby-feeding problem, the favorable and unfavorable conditions affecting its administration deserve consideration. Quite apart from the results of intentional or accidental adulteration and variations in the quality of the milk, which have been frequently discussed in the medical journals, there may be objections raised by the patient himself, often arising from defective digestive capacity, that may prevent the use of milk, which otherwise would be appropriate to the case. Bartholow¹ has pointed out some of the abuses of milk-diet in therapeutics, and very properly advises against its administration in acute rheumatism, especially in large quantities, on account of the excess of lactic acid introduced into the system by its digestion, which he believes increases the risk of endocarditis, delays recovery

¹ Presented to the College of Physicians, Philadelphia, November 6, 1889.

¹ Journal of Reconstructives, vol. ii., No. 3, p. 10.

and favors the occurrence of relapses. He also states that "In certain disorders of the digestive functions milk causes a sense of discomfort, decided uneasiness, oppression, sometimes even pain, and it prolongs the morbid condition. Such cases may be grouped into two classes: those in which the casein is the offending material; those who cannot properly digest the cream or butter. We find examples of the first class more frequently among children, but they are by no means uncommon in adults. They are detected more readily in early life, because the curds are rejected by vomiting or appear undigested in the stools. Adults unable to digest casein, or who digest it slowly or painfully, have epigastric distress, heaviness and oppression for several hours after meals, stupor and disinclination for exertion coming on after an hour or two and continuing until the offending material has passed well down the intestines." The remedy for digestive disorder occasioned by excess of cream is generally applied with quite unusual consideration for the patient's welfare, by the milk-vender before delivering the article to the customer; when this has been neglected, the excess of cream may be removed by partially skimming the milk before giving it to the patient. This procedure will generally be required in the case of Alderney milk, which often contains too much fat even for infants.

When, on the other hand, there is experienced more or less difficulty in disposing of the casein (and this generally occurs in fever, on account of the deficiency of secretion from the peptic and other glands of the stomach), the administration of pepsin, or an artificial gastric juice, seems the natural resource. Where the diet is cow's milk, it seems reasonable to assume that calf-pepsin, being the proper digestive ferment for this food, ought to be a valuable aid to the treatment, to prevent the occurrence of *embarras gastrique* and to favor the assimilation of the albuminoids of the milk. The dry calf-pepsin, I believe, has been entirely superseded by the more active pepsin of the hog. Scheffer found that the former had only a moderate action upon boiled egg-albumen as compared with the latter; and probably hog-pepsin, when carefully prepared, is preferable for most purposes where a digestive ferment is needed. But where the diet is cow's milk and not hard-boiled eggs or meat, the calf-pepsin would seem to possess especial appropriateness.

Without extending this communication unduly by going into unnecessary detail, I would simply make the following claims, which appear to me to be well founded, for the solution of calf-pepsin in glycerin which I have just presented:

1. The glycerite of calf-pepsin, prepared in the manner described, is a permanent, reliable, and elegant pharmaceutical preparation, besides being the most active form in which to administer this agent.

2. It differs from the wine of rennet, in possessing greater coagulating and peptonizing power, a drachm readily acting upon a pint of milk. Rennet, as stated by Randolph, will not coagulate boiled milk; the glycerite of calf-pepsin does so readily, and forms a soft, delicate curd consisting largely of peptones. In the feeding of infants this property becomes of special importance, in view of the increasing prevalence of the use of sterilized (boiled) milk. In this connection we recall the statement of Kirchner that the difference in digestibility of milk from the cow and that from woman, is wholly due to the large amount of peptones in the latter.

In the case of infants, I usually direct that from ten to twenty drops of the pepsin preparation shall be given fifteen or twenty minutes after feeding; in adults one-half to one drachm is usually added to the milk before it is swallowed, as a matter of convenience. Junket made with this glycerite of calf-pepsin, from either boiled or unboiled milk, is a delicate and easily digested form of nourishment for the sick.

I would mention incidentally, in conclusion, that the preparation may be used to brush over the dry, coated tongue of typhoid fever patients, and to spray the throat in cases of diphtheria, although, as yet, I have not had the opportunity of using it for this purpose. I can, however, speak confidently of its value, in conjunction with sterilized milk, in artificially fed infants, and as a useful adjunct to the milk-diet treatment of various disorders of the stomach and nervous system.

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MEDICAL PROGRESS.

Hydronaphthol in the Treatment of Tinea Tonsurans.—According to DR. MORGAN DOCKRELL, the most efficient method of treating tinea tonsurans is the following: "Have the head completely shaved, leaving the usual fringe all round; then wash with a 5 per cent. hydronaphthol soap and water as hot as can be borne. After drying the scalp, apply over the affected area a 10 per cent. plaster of hydronaphthol in narrow strips, letting each strip overlap its fellow, taking care that the plaster extends quite half an inch beyond the margin of the diseased patch. Outside the margin of the plaster paint a layer of a 10 per cent. hydronaphthol jelly (melted) so as to exclude all air. At the end of four days remove the plaster, when the diseased stumps will be found adhering to it. Repeat the process, applying for one week a 20 per cent. plaster. Again repeat the process, this time applying the 10 per cent. plaster for ten days, when on removal the disease will be found to be cured. During the plaster treatment apply a 5 per cent. ointment to the unaffected portions of the head night and morning. Care should be taken that all articles brought in contact with the head before treatment be destroyed, otherwise reinfection will take place, and the treatment be brought into discredit.—*Lancet*, November 30, 1889.

Injections in the Treatment of Gonorrhœa.—FRIEDHEIM, of Leipsic, in determining the most useful injection for the treatment of acute gonorrhœa, assumes that the material to be injected should destroy the vitality of the gonococcus, and should allay, or, certainly not add to, the already existing irritation of the mucous membrane. In about 1200 cases he has experimented with solutions or mixtures in various strengths, of formamide of mercury, calomel, bichloride of mercury, tannic acid, the salts of zinc and lead, subnitrate and salicylate of bismuth, permanganate of potassium, pyrogallol acid, chloroform water, iodoform, creasote, boric acid, antipyrin, resorcin, salicylate of sodium, naphthalin, and creolin, all of which he found either without effect upon the gonococci, or too irritating. With weak solutions of nitrate of silver, as recommended by Neisser, his results were different, and, after experiments upon 318 patients, he concludes this to be the most satisfactory injection. This treatment, to be satisfactory, should be begun in the earliest stage of the disease. A solution of the strength of 1 : 4000 or 1 : 2000 should be injected from four to six times daily. In about four days the discharge becomes thinner and the cocci fewer. After this several of the daily injections of silver solution may be replaced by solutions of sulphate of zinc or boric acid, though at least one daily injection of the nitrate should be used for several weeks.

In a few patients the urethra will be found so sensitive that the silver solution in the strength mentioned will cause considerable pain, and in such the strength may be reduced or each injection preceded and followed by one of boric acid solution. Gonorrhœa situated in the anterior urethra Friedheim has found to be very favorably modified by this treatment, the duration shortened, and complications prevented. Gonorrhœa of the posterior urethra he believes should not be treated by injections of any kind.—*Therapeutische Monatshefte*, November, 1889.

Sweating of the Feet.—According to the *British Medical Journal*, experiments on 18,000 cases in the German army have conclusively proven chromic acid to be the most satisfactory application for sweating feet. The feet should be washed, and when dry a five per cent. solution of the acid applied with a brush. Two or three applications are, as a rule, sufficient, though in some cases the treatment must be repeated in two or three weeks.

Treatment of Tonsillitis.—DR. HABERKOM, in the *Centralblatt für Chirurgie*, recommends salicylic acid in the treatment of acute tonsillitis. "The best and simplest mode is to apply the powdered acid directly by means of a rather large camel's hair pencil, which may be slightly moistened. In this way it is brought directly in contact with the diseased surface, and but few applications are necessary.

When the tonsils are covered with a thick mucous coating—which may be diphtheritic—it is necessary to remove it previously, and the following liquid, to be also applied with a brush, acts extremely well :

Pepsine	30 grains.
Dilute hydrochloric acid	3j.
Water	3v.
Glycerin	3jv.

The coating is quickly dissolved (digested) by this solution.

Beside applying the acid locally, it is advisable to give it internally at the same time, thus :

Salicylic acid	30 grains.
Mucilage of acacia	3j.
Simple syrup	3ss.
Water	3jvss.—M.

Dose.—A tablespoonful every two hours.

In the more chronic forms it is well to pencil the tonsils with :

Tannin	15 grains.
Tincture of iodine	2 drops.
Glycerine	3v.
Water	3j.

For the prompt dispersal of threatened quinsy, apply with a brush three times a day the following solution :

Tannin	15 grains.
Tincture of iodine	3 drops.
Carbolic acid	3ss.
Glycerin	3v.
Water	3ijss.

—*Provincial Medical Journal*, December, 1889.

Preparation of Aseptic Sponges.—PROFESSOR KEEN recommends the following method of preparing sponges for surgical operations :

1. Beat with wooden mallet, to get rid of sand and calcareous matter.
2. Soak in warm water for twenty-four hours.
3. Soak in solution of potassium permanganate (3j to gallon) twenty-four hours.
4. Wash thoroughly in warm water.
5. Place for one minute in—

Sulphite of sodium	3x.
Hydrochloric acid	3j.
Water	gallon j.

6. Wash in water and place in 20 per cent. solution of carbolic acid.—*College and Clinical Record*, December, 1889.

Treatment of Psoriasis at Lyons.—The following is the outline of Gailleton in the *Gazette Hebdomadaire* of December 13, 1889. The indications are: 1, cleanse the surface; 2, modify the local state; 3, prevent recidivity. For the first indication prescribe alkaline baths accompanied by frictions with soap to remove the scales. In the treatment of the diseased surfaces Gailleton prefers local application of chrysarobin or pyrogallol. The first is used in a pomade in the proportion of 1 to 10, and employed with frictions. The pyrogallol salve should be of the strength of 1 to 5 in psoriasis vulgare. Its use requires management since it may inflame the skin or provoke poisoning by absorption. It is also useful in the acute psoriasis of a scarlatiniform type.

The general and preventive treatment: Arsenic should be given in the acute stages, beginning with Fowler's solution, in the dose of five drops, augmenting it to twenty [small doses would probably be more safe.—E.D.], or arseniate of soda may be given in syrup.

To complete the cure, use simple baths every day for one, two, or three hours. This is an important part of the treatment.

The Treatment of Influenza.—In the *Revue Générale de Clinique et de Thérapeutique* of December 12, 1889, HUCHARD gives the following outline of the treatment of this troublesome affection, dividing it into that devoted to the benign form and those cases which present the more serious aspect. In all the past epidemics of this disease one of the principal evidences of its presence is the nervous adynamia. Against this state all our efforts should be directed, and for this reason quinine, alcohol, and similar drugs should be given, or, if the state be grave, injections of ether and cardiac stimulants. The quinine is indicated since it controls the fever. The dose should be from 7 to 15 grains in the morning, and 15 grains of antipyrin at night. Where no antipyretic is needed, small, frequently repeated doses of quinine are to be used as follows:

Sulphate of quinine . . . 30 grains.

Make in 20 powders. Take 4 a day, or 1 every four hours.

In those cases where the disease is accompanied by rheumatic and neuralgic pains the following should be used, the soda quieting the stomach:

Antipyrin . . . 150 grains.
Bicarbonate of soda . . . 75 "

Make into 10 powders, and take 1 powder every four hours in a little sweetened water, between or immediately after meals.

If there is any reason why antipyrin is not successful, use phenacetin, 4 grains every three hours.

When the rheumatism is severe, use

Salol . . . 75 grains.

Make into 10 powders. Take 5 a day. [This we think too much by half.—ED.]

When the disease affects the pulmonary mucous membrane the condition often becomes most grave, and marked adynamia asserts itself. Stimulants, tonics, and good foods should be given, particularly milk. Diuresis should be increased to eliminate the poisons from the body, and this is particularly true in those cases where there is renal or cardiac dyspnoea. If collapse ensues, heat should be applied to the body and caffeine and digitalis given hypodermically. In those cases where the disease chiefly affects the gastro-intestinal tract, castor oil, or some similar purge, should be administered, and followed by salicylate of bismuth, or magnesia, naphthol, iodoform, or like drugs.

Dengue Fever.—Numerous observations are being made upon dengue fever in Eastern countries, where ample opportunities have been afforded by the epidemic which has been prevalent for some months. According to the *Revue Médico-Pharmaceutique* of Constantinople, although its microbe is as yet undiscovered the disease should be classed among the acute infectious maladies, resembling acute rheumatism and allied diseases.

As to the contagiousness of dengue fever, the writer has never observed or read a striking proof that this disease is propagated from person to person, as is the case with variola, while there are reasons for believing that its method of propagation is identical with that of Asiatic cholera and typhoid fever.

Dengue is not contagious; it is not miasmatic, like malaria, but a miasmatico-contagious disease, like Asiatic cholera, typhoid fever, and epidemic cerebro-spinal meningitis.

The poison is prepared in infected soil, and received by means of water and emanations.

A rocky soil, according to the theory of Pettenkofer, is highly unfavorable to the development of dengue.

Dengue has been believed to be contagious from the fact that several persons in a household are apt to be attacked by it. There are instances to the contrary.

Dengue attacks both sexes and every age without the least predilection. Very few persons are immune. The epidemic may become pandemic and attack even domestic animals.—*Abstract of Sanitary Reports*, December 20, 1889.

Formula for the Administration of Naphthalin.—DR. TICH-BORNE, in the *Medical Press and Circular*, December 11, 1889, gives the following formula for the administration of naphthalin.

Naphthalin . . . 16 grains.
Expressed oil of almond . . 4 drachms.
Acacia . . . 1 drachm.
Syrup of orange . . . 1 "
Water . . . 3 drachms.

The naphthalin should be thoroughly mixed with the oil of almond before adding the remaining ingredients.

Subcutaneous Administration of Iron.—PROFESSOR ROSENTHAL, of Vienna, advocates the hypodermic administration of iron in the cases of delicate neurasthenic persons who suffer, as such often do, from atonic dyspepsia. Here even small doses of iron taken by the mouth will sometimes produce disorder of the stomach. In severer forms of disease, such as pernicious anæmia, malarial cachexia, and the graver forms of leukæmia, there does not appear to be any advantage in the employment of the hypodermic method of administering iron. Two new preparations are recommended by Professor Rosenthal for hypodermic use—viz., the peptonate and the oleate of iron. He states that he has never seen bad results follow subcutaneous injections of these preparations, and he explains the fatal consequences that have occasionally been reported as following injections into vascular tumors of the head, by the fact that the vessels composing such tumors are generally closely connected with the veins of the dura mater. He has frequently seen venous enlargements in the legs shrink after being injected with dilute perchloride of iron, no dangerous symptoms ever ensuing.—*Lancet*, December 14, 1889.

Prescription for Tympanitis.—The following formula for tympanitis is quoted in the *Deutsche medicinische Wochenschrift*, November 28, 1889:

R.—Naphthol
Magnesium carbonate } . . . 75 grains.
Pulverized charcoal }
Oil of peppermint . . . 10 drops.—M.

Divide into 15 powders, of which one is to be given when required.

THE MEDICAL NEWS.

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SATURDAY, JANUARY 4, 1890.

POLITICS IN MEDICINE.

THE NEWS has hitherto forbore to comment upon the ignoble strife which the Mayor of Philadelphia has seen fit to wage with the forlorn and friendless sick paupers of the city. We could not believe that a majority of five citizens, selected as fit to act in the delicate and responsible position of members of a "Board of Charities" could be found who would prove faithless to their trust, and oblivious to the welfare of those whom they were bound by every consideration of duty and honor to protect.

The idiosyncrasies of our Chief Magistrate are so generally understood, that we presume no one expected that the unreasoning wrath of his wounded vanity would be satisfied without victims, but it was not supposable that he would find three willing and obedient tools in the Board of Charities to carry out his commands. The only question which the Board had to consider in renewing the staff of the Philadelphia Hospital was the interest of the unfortunates whom poverty and sickness have thrown upon the tender mercies of public charity. They have no political pull; they have no opportunity of making their wants and miseries known to his Honor the

Mayor over the whist-table: they are simply dumb sufferers who must submit in silence to their fate. If their ailments are treated with knowledge and skill they may recover and become useful citizens again; if they are treated ignorantly and are used as *corpora vilia* to educate young men and advertise medical colleges, they can only die in silence, and those dependent upon them can starve. To talk of dividing "patronage" of this kind among medical institutions is far worse than the worst political profligacy of office-brokerage, for the spoils to be apportioned are the agonies of the city's poor.

No more difficult or weighty duty could be imposed on five men than the selection of the thirty-three members of the hospital staff, on whom devolves the care of the sick paupers in the population of a million souls. With a conscientious man such a duty could only be discharged after the most careful and minute investigation into the acquirements and fitness of each aspirant and a selection based solely upon the interests of the unfortunates who are to be cared for. Yet when the Board assembled and a list of candidates was put in nomination, Mr. McMurtrie vainly begged for a postponement to enable him to make some inquiry as to the comparative merits of competitors whose names were wholly unknown to him. The voting was commenced forthwith in spite of his protests and went on with a regularity and precision which showed that the slate had been made up by a power behind the throne, and that the Board was there simply to register its decrees.

In the name of the profession and of common humanity we protest against such political management of a great public charity, and we do this irrespective of the comparative merits of the gentlemen who were dropped and of those who were elected to their places. We are not criticising the latter, but the methods by which politicians have used them to establish political autocracy in the management of the hospital, and to proclaim that subserviency to the wishes or whims of the Mayor is the condition upon which members of the profession can have the privilege of ministering to the sick poor. If good men can thus be used this year, indifferent men or bad men can be so used next year. It becomes a matter of chance or caprice, in which the real interests concerned—those of the patients of the hospital—are the last to be considered.

REVIEWS.

CYCLOPÆDIA OF THE DISEASES OF CHILDREN, MEDICAL AND SURGICAL. By AMERICAN, BRITISH, AND CANADIAN AUTHORS. Edited by JOHN M. KEATING, M.D. Vol. II. 8vo., pp. 1066. Illustrated. Philadelphia: J. B. Lippincott Company, 1889.

THE second volume of this Cyclopædia more than fulfils the promises held out by the first, and we regret that limited space forbids mention of many articles deserving of high praise.

Part I., Diseases of the Skin, is written entirely by American authors, the names of Hyde, Hardaway, Bulkley, Van Harlingen, I. E. Atkinson, and Stelwagon being sufficient to indicate the worth of the articles. Perhaps the most admirable of these are Eczema, by Van Harlingen, and Parasitic Diseases, by Stelwagon, which are discussed in a manner peculiarly valuable to the general practitioner.

In Part II., Constitutional Diseases and Diseases of Nutrition, are found the most elaborate and interesting articles in the volume. Particularly praiseworthy are the exhaustive essays upon Scrofulosis, Tuberculosis, and Rachitis, respectively contributed by Ashby, Jacobi, and Barlow and Bury. Tuberculosis exhibits the usual broad views and extensive reading of its author, who, never content with a simple statement of others' views, invariably supplements them with his own suggestive comments. Dr. Jacobi seems to accept unhesitatingly the communicability of tuberculosis, and as a prophylactic measure insists upon the importance of sterilizing all milk given to bottle-fed children.

Rachitis is most exhaustively studied by the joint authors, who quote extensively from the work of Kassowitz, and accept his view that the essential morbid change in rickets is increased vascularization of the bone-forming tissues; certainly the most satisfactory explanation of rachitic phenomena, and with abundant evidence of truth. Though followers of Kassowitz in pathology, we are disappointed at learning that the authors have had no experience with phosphorus, the use of which, in this disease, he so strongly advocates. The last work, and not the least important, of the late Dr. Fothergill, is his contribution to this section on the Urinary Diatheses: Oxaluria, Phosphaturia, Lithuria. It is written in the well-known attractive style of its prolific author, and teems with suggestive thoughts.

In Part III., Diseases of the Respiratory Tract, we find papers on nasal diseases by Mackenzie, of Baltimore, MacCoy, Morgan, Delavan, Bosworth, and Seiler; on diseases of the pharynx by Ingalls, Robinson, and Allen; on laryngeal diseases by Sajous, Morell Mackenzie, Northrup, and Wharton. We are glad to note the important position here assigned to the upper respiratory tract, which is so constantly neglected in the management of children, to their discomfort and suffering in after years.

Excellent and clear advice is given by Dr. Northrup in his eight pages on Intubation.

Tracheotomy, by Dr. Wharton, is a most carefully prepared and elaborate essay upon the subject, more satisfactory in many respects than the somewhat similar work of Lefferts. Among the indications for operating

in diphtheritic laryngitis, Wharton esteems the ability or inability of the patient to sleep. If able to sleep for a few hours at a time, he believes operation is not usually required. This doubtless is, in many cases, a valuable guide, but its value should be estimated in connection with other symptoms, and septic stupor should not be mistaken for true sleep.

Among diseases of the lungs Croupous Pneumonia is discussed by Francis Minot in an article which, though short, is full of good sense. The author decries the frequent use of aconite and quinine in this disease, believing the former dangerous, the latter worthless.

Bronchitis, by F. Gordon Morrill, is, to us, not a very satisfactory contribution, particularly in the matter of treatment, where he gives numerous conventional formulæ, some variety of syrup being the basis of each. Syrups, we believe, are abominations, interfering with digestion and thus doing more harm than good. Much the same may be said of flaxseed and slippery-elm tea, of which the author advises the administration in large quantities. We regret that no mention is made of inhalations, which with bronchitis in children have in our hands rendered excellent service. Other articles on pulmonary diseases are, Emphysema, Asthma, and Hay-fever, by Shattuck; Phthisis, by Jacobi; Pleurisy, by Whittier; Empyema, by Cabot; Diseases of the Thyroid and Thymus, by Rex, and Affections of the Mediastinum, by Edwards, all of which are good. The latter is drawn largely from Hare's Fothergillian Prize Essay, which, however, could hardly be avoided by the author, and which in no way detracts from the value of the article.

Part IV., Diseases of the Circulatory, Hæmatopoietic and Glandular Systems, is opened by DaCosta in a rather brief article, giving the impression of hurried preparation, on Functional Disorders of the Heart. Osler gives an interesting *résumé* of Congenital Affections of the Heart.

Bruce contributes excellent papers upon Enlargement of the Heart and upon Myocarditis and Cardiac Aneurism. Sansom's article on Chronic Endocarditis—Valvular Disease—will naturally be one of the first turned to by those interested in cardiac diseases, and in it they will find no cause for disappointment. This recognized authority has here written a clear and practical description of chronic endocarditis, its sequelæ, and treatment.

In Part V., Diseases of the Mouth, Tongue, and Jaws, we find articles upon Diseases and Care of the Teeth, by Darby; Congenital Defects and Deformities of the Face, Lips, Mouth, Tongue, and Jaws, by Roswell Park; Diseases of the Mouth, by Allchin; Harelip and Cleft Palate, by J. Ford Thompson; Injuries and Diseases of the Jaws, by Mears, all of which are thoroughly in keeping with the character of the volume, being clear, concise, and practical.

We cannot close this notice without reference to the illustrations, which are more numerous and of better execution than those of Volume I.

Dr. Goodell's Address before the Ontario Medical Association.—Dr. William Goodell has been requested by the Ontario Medical Association of Canada to deliver the address at the annual meeting of the Association, to be held in Toronto, June, 1890.

SOCIETY PROCEEDINGS.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, November 4, 1889.

THE PRESIDENT, D. HAYES AGNEW, M.D.,
IN THE CHAIR.

DR. THOMAS G. MORTON exhibited

SPECIMENS OF ASTRAGALUS REMOVED FOR EQUINOVARUS,

and said that since the last meeting of the Academy he had removed the astragalus in several cases for equinovarus, the youngest patient being a child of eighteen months, who had been treated for ten months with daily massage, and under ether the feet had been thoroughly stretched, and a carefully moulded splint applied. It was impossible to bring the foot to a right angle with the leg from the presence of the astragalus, which was found to be anterior to the tibia. An incision two inches in length was made commencing back of the fibula and continued forward directly over the prominent astragalus, the posterior part of which was found to be in front of the tibia. The astragalus in both feet were excised, and the tendo-Achillis divided; perfect position was at once obtained without effort. The bones removed were so different in shape from the normal bone that they were shown to Professor Leidy, who wrote that "the two specimens of bones submitted to my examination a few days since are so altered from the normal form that I utterly failed to recognize them as being astragalus."

Dr. Morton also showed similar specimens from two other and older cases recently operated upon.

At the last meeting of the Academy the question of the condition of the ankle after the excision of the astragalus was briefly discussed; in the cases which he had had, the joint motion before operation was greatly interfered with and could not be increased from the presence of the astragalus in front of the tibia. On removing the astragalus the foot can at once be placed in a normal position and retained so without any effort, or the use of a brace, and all the cases so operated upon have required but a single dressing, generally removed about the third week. In cases where stretching and tenotomy fail, and in cases of ankle malposition, he advocates very early excision, because the immediate and complete rectification of the deformity permits better development of the limb.

DR. MORTON next reported a case of

FRACTURE OF THE LOWER END OF THE RADIUS AND ULNA.

On November 1st, a man, aged thirty-five, was admitted into the Pennsylvania Hospital with a compound depressed fracture of the skull and facial bones, having been struck by a locomotive; there was also a fracture of the lower part of the forearm with marked deformity; the patient was severely shocked, and died without reacting. The appearance of the deformity of the forearm fracture was well shown in a photograph which was presented, and the lines of fracture in the dissected specimen. There was an irregular transverse fracture of the lower end of the radius half an inch from the carpal

articulation; at the outer side of the lower fragment there was also a vertical fracture extending into the joint a quarter of an inch from the ulnar attachment; the lower fragment was found above and resting upon the upper fragment, presenting the typical "silver fork" deformity of Velpeau.

DR. J. EWING MEARS then reported a case of

STAB-WOUND OF THE THORAX, INVOLVING THE PERICARDIUM, DIAPHRAGM, AND STOMACH.

On the evening of August 10, 1889, while the patient and his brother were engaged in an altercation, the latter threw at him an open penknife. The blade struck the patient upon the chest from above downward, penetrating the intercostal space between the sixth and seventh ribs and passed inward, downward, and backward, and was buried in the tissues up to the handle. It remained thus until the patient removed it some minutes later. But for some slight pain, at the time of injury, and some temporary respiratory embarrassment, he experienced no symptoms of any moment. After the removal of the knife he went home, and the wound was dressed with *isinglass plaster*. That night he slept fairly well, but the next morning noticing a protrusion from the wound he was taken to St. Agnes' Hospital. On examination at the hospital by Dr. Vincent, Resident Physician, a small piece of omentum, about one and a half inches long and three-fourths of an inch wide, protruded from the wound. The omentum presented no signs of strangulation. The patient complained of no pain, but there was some difficulty in respiration. A probe was introduced into the wound, and its direction noted to be downward, backward, and inward. The protruding omentum and surrounding tissues were washed with bichloride solution 1:2000, and a dry bichloride dressing applied.

On the following day Dr. Mears reduced the omental hernia and closed the wound with two deep sutures of carbolized silk and dressed it with dry bichloride gauze (1:1000). During the operation no pain of any moment was noted, and upon its completion the patient was ordered morphine $\frac{1}{4}$ grain at 6 P. M., and three ounces of milk every four hours.

12th. Patient felt very well, and there was but slight increase of the pulse rate; no pain and no fever. Passed a fairly good day, and about midnight had a stool, arising from his bed for that purpose, which was hard, lumpy, and caused him to strain.

13th. Felt quite well until 7 A.M., when he was given two ounces of ice water by the nurse, and soon after complained of feeling faint. A cold sweat followed; but these symptoms passed away. At 8 A.M. he was given two ounces of milk, and in fifteen minutes he complained of nausea. At 8.30 A.M. he vomited a little blood, which was dark and mixed with milk. Again he vomited, but this time about four ounces of uncoagulated bright blood, and soon after he vomited about two pints more—some bright red, but the most dark and coagulated. His pulse could scarcely be perceived, his extremities became cold, and his respiration very shallow. He was given morphia sulphatis hypodermically and artificial heat applied to the extremities. The fluid extract of ergot was also given, but in a few minutes he became nauseated and vomited again, the vomited matter consisting entirely of bright blood. The amount

thrown up was about one pint. This was his last attack of vomiting, and it was about three hours before he began to react. By 6 P. M. he was in comparative comfort again.

13th. Several bloody stools were passed, each more than four ounces.

14th. Several small, bloody stools.

15th. No movement of bowels.

18th. Passage in the night; contained very little blood.

19th. Dressings removed, and wound found in good condition; no signs of inflammation; sutures removed and lips of wound held together by adhesive strips over which dry bichloride gauze and a roller were applied.

20th. Felt quite well; no pain; took food by the mouth for first time since the hæmatemesis and retained it.

21st. Troubled with slight colic but passed gas freely, and was thus relieved; bloody stools no longer present.

22d. Given an enema, and bowels moved twice; felt no pain, and stools were natural, quite copious and well formed.

30th. Dr. Mears made an examination of the wound and described it as situated between the sixth and seventh rib in the line of the left nipple one-fourth of an inch from the junction of the costal cartilage and three inches from the middle line.

The cicatrix was obliquely placed from above downward and from without inward.

The wound was entirely united. The cicatrix measured one-half an inch in length.

The foregoing history presented several points of interest with reference to the parts involved and the occurrence of the hemorrhage forty-eight hours after the receipt of the injury. The position of the wound and the direction taken by the knife-blade indicate penetration of the thoracic wall, pericardium, and diaphragm. The vomiting of blood and its passage by stool establish the fact that the wall of the stomach was incised at a point which involved section of a bloodvessel of some size. The presence of the coagulated blood in the vomited matter demonstrates the existence of hemorrhage at a time previous to the act of emesis, which was held in check by the enforced rest of the patient. Prior to the receipt of the injury the patient had indulged in copious draughts of beer, which distended the stomach and brought it into close contact with the diaphragm. The wound of the pericardium was evidently but slight and at its border of attachment to the diaphragm.

The prompt cessation of the hemorrhage under the treatment adopted justified its continuance and the withholding of operative procedures. For six days following the hæmatemesis alimentation was maintained exclusively by the rectum, beef-tea and brandy being administered at intervals of four hours. Morphine was given hypodermically night and morning in one-sixth and one-eighth grain doses. At the expiration of four weeks the patient was discharged cured.

CORRESPONDENCE.

DETROIT.

To the Editor of THE MEDICAL NEWS,

SIR: At the last regular weekly meeting of the Detroit Medical and Library Association, the President,

Dr. Maclean, exhibited several very interesting pathological specimens. One, an osteo-sarcoma involving the left scapula, the entire bone being excised, and the patient, a young man, making a rapid recovery, with a very useful arm.

He also reported the case, and exhibited the specimen, of resection of the head of the humerus, from a young man, who was injured by a base-ball striking him on the right shoulder. The operation of resection was followed by a rapid and extensive development of bony material, suggesting osteo-sarcoma. The patient died in a few weeks from exhaustion.

The third specimen was a very vascular and fibro-cystic tumor, unlike nævus, of the cheek, which, subsequent to removal, gave great and alarming trouble from recurrent hemorrhages. The patient is at present quite well.

An adenoma of the breast removed without interference with that gland was also exhibited from a girl, aged sixteen years. No recurrence.

The last exhibit embraced two portions of a femur, which had been operated upon for non-union after fracture associated with dislocation of the head of the same upon the dorsum ilii. The operation for non-union was not successful, and symptoms developed which necessitated amputation of the thigh. The patient recovered. The non-union in this case was attributed by the exhibitor to the very severe shock received by the bone—a heavy derrick having fallen upon it—and this he considers one to be added to the many causes for non-union in fractures.

A matter which has come to my notice affecting the medical profession is a case of gross falsifying upon the part of a medical institution.

Dr. W. E. Eggleston, in a special article on "Our Medical Colleges," published in the *Journal of the American Medical Association* for May 25, 1889—in a special edition of 75,000 copies scattered broadcast throughout the United States—endeavored to convey a true idea of the work required of students in every college in the United States and Canada.

In spite of the fact that every effort was made to get a truthful statement from each medical college—by even writing to them in several instances—I find, upon investigation, that the replies in answer to most important questions, as published, from the University of Michigan are absolutely false in eight instances.

In the first place, they claimed 800 beds at command for clinical instruction when, as a matter of fact, there were at that time 66 beds for patients and 4 more being repaired, making 70 beds in their possession, which by no error could be changed into 800.

Answers to the following questions were requested:

1. Is each student required to examine and prescribe for patients in a hospital?
2. Actual clinical work done by the student?
3. Is each student required to take a practical course in operative surgery, bandaging, and minor surgery?
4. Is each student required to practise on the manikin or living subject, or both, in obstetrical diagnosis and treatment?
5. Is each student required to examine gynecological cases and to prescribe or treat them under direction of a teacher?
6. Physical diagnosis. Is each student required to

practise this on the living subject, under the direction of a teacher, or is he simply told how to do it?

7. In the final examination on practice of medicine, is the candidate required to diagnose the disease of a living subject, in the presence of one or more teachers and the patient, discuss the case and indicate treatment?

8. Is the same true as regards surgical examination?

9. In the final anatomy examination, is the student required to demonstrate any part of the body?

The answers published were "yes," when, as a result of investigation, it is clearly proven the replies should be "no".

The elasticity of the assertions published from our medical colleges is to be greatly regretted, and we are always ready to make allowances for their announcements; but when an institution, and a State institution at that, makes such direct false assertions in reply to questions put for the benefit of the medical profession, that institution is deserving of the severest censure. No words can be too harsh for such deceit.

The statement in your extract from the *Ann Arbor Courier*, in THE MEDICAL NEWS of November 23, 1889, is incorrect. Dr. Maclean was appointed to the professorship of surgery in the Michigan State University in 1872, and resigned in 1889.

The patriotic move to have the Stars and Stripes floating over our school-houses has extended itself to the Detroit College of Medicine. Recently, a beautiful flag was unfurled from the flag-staff of the above College with elaborate ceremonies on the part of the students, interspersed with college songs, cheers and a tiger.

The Detroit Board of Health has issued a circular letter to the effect that all typhoid fever cases will henceforth have to be reported to the Health Officer, according to law, but rules it "not necessary to placard the houses where such patients are sick."

ANN ARBOR.¹

To the Editor of THE MEDICAL NEWS,

SIR: In reply to the above, the animus of which is apparent to all who are acquainted with the Medical Department of the University of Michigan, I wish to be as brief as possible. The number of beds in the hospital is 70, but it has, for a number of years, been necessary to use beds in private houses near by; and this fact must have been known to the writer of the above. The number of patients accommodated outside of the hospital was in 1881 and 1882, 498; in 1883 and 1884, 530; in 1884 and 1885, 351. The exact numbers are not given in the remaining reports, but the above may be taken as fair averages. Our Secretary answered the question, "How many beds are devoted to clinical instruction?" by the number 80, which was an under-statement and not an exaggeration. By a typographical error another cipher was added. This was so evidently an error that no one thought of correcting it. Now, in reply to the other questions:

1. Students are required to prescribe for the patients in the hospital, and this has been the practice from the time when the hospital was opened. Every operation or

other case in surgery is assigned to two members of the senior class, who, under the professor or his assistant, do all the dressing and conduct the after-treatment of the case. The same general method of instruction is followed by the professor of clinical medicine and his assistant. In ophthalmology students are called upon to examine and diagnose the case. Then, if an operation is necessary, the patient is anesthetized and a section of the class is invited to stand closely around the table, while the assistants required in the particular case are selected from the section. The after-treatment is assigned to two seniors, who are required to visit the patient twice a day. There is also practical instruction given in the use of the ophthalmoscope and the laryngoscope in a dark room.

2. This is answered above.

3. Practical courses in minor surgery and bandaging are given; if they have been omitted during any year it lies with the then professor of surgery to explain. I have before me a report given by Dr. Hendricks, assistant to the professor of surgery two years ago, in which he states that he devoted over forty hours to minor surgery, with nearly thirty hours to surgical anatomy and operations on the cadaver with the senior students of that year.

4. The students not only witness confinements, but after properly disinfecting their hands, make digital examinations during the several stages of labor. If any member of the class of '89 failed to witness a case of confinement, it was not for want of opportunity. The professor of obstetrics tells me that "every senior last year who had not had such experience elsewhere, attended a confinement in the hospital."

5. Gynecological cases are examined before sections of the class, and so far as can be done, the students make these examinations and diagnose the case.

6. Students are drilled practically in sections, daily, in auscultation and percussion. This embraces the study of both healthy and diseased organs.

7. Every senior student is required to examine, diagnose, and prescribe for patients before the professor and members of the class, and the correctness with which this is done is an important factor in deciding the vote which the student receives when he comes up for graduation.

8. Surgical examinations are required, as has been shown above. Whether or not this was done last year I cannot say. It is to be presumed that it was done. In his report to the Board of Regents in 1882, the professor stated: "Four hundred surgical cases passed through my hands during the session now closed. Of these, a large proportion was presented to the class on several different occasions, for the purpose of illustrating the different forms or phases of their ailments, and also to illustrate the effects of treatment. The dressing and after-treatment of these patients have furnished the members of the graduating class with much valuable practice." I have no reason to suppose the practice has differed in other years. After enumerating some of the operations, he says: "From this partial list it will appear that almost every department of surgery has been illustrated by characteristic cases."

9. This question, as stated by your correspondent, is somewhat indefinite; but I will say that every student must have dissected and demonstrated every part of the body before presenting himself for graduation.

¹ In view of the fact that THE MEDICAL NEWS cannot be the bearer of any news which seems to be born of misunderstanding, the following reply has been sent from the University of Michigan after reading the Detroit letter.

Now, Mr. Editor, the answers given to the questions of Dr. Eggleston by the Secretary of the Medical Faculty of the University of Michigan were true and just. The Medical Department has been in existence for a great many years; the graduates are numbered by thousands; they are located in every section of the country; by them the past work done here may be judged. As to the work now being done, I will say that the hospital, clinic rooms, lecture rooms, and laboratories are open for the inspection of any medical man.

C. L. FORD, *Dean.*

TREATMENT OF INFLUENZA.

To the Editor of THE MEDICAL NEWS,

SIR: As an item of interest, the quickest relief from influenza which my patients obtain is through the use of pine needle cigars and cigarettes. I find they will act as a preventative, and once the disease has instituted proceedings they act like magic. Any one can make the cigarettes. I have no hesitancy in recommending their use, as nothing is used in their manufacture but the fresh pine needle and the best of tobacco. A non-smoker can inhale with no unpleasant effect.

Yours respectfully, HARRY NEAFIE, M.D.
FREEHOLD, N. J.

OBITUARY.

DR. JAMES H. HUTCHINSON, of Philadelphia, died, after a few hours of illness, on Friday morning, December 27, 1889. Descended from a prominent physician of this city, Dr. Hutchinson inherited the love of his profession which he evidenced in his devotion both to its practice and advancement. At once one of the most learned writers and most conservative of advisers, he occupied a position representing the best admixture of progress and clearness of thought that could be turned to by the general practitioner needing a consultant, and in consequence, one of the last professional acts in his life was to go out of town to see a serious case of illness for another physician.

Dr. Hutchinson graduated in arts from the University of Pennsylvania in 1854, and, after spending a year abroad, began the study of medicine, graduating, in 1858, from the same institution which gave him the degree of A.B. He at once became resident physician to the Pennsylvania Hospital, and, after a service of eighteen months, went to France and Germany, where he devoted himself to dermatology, being part of the time under Hebra. On returning to America, he became physician to the Children's Hospital, a position which he held at the time of his death. In 1862, he was made physician to the Episcopal Hospital, where he served constantly till elected to the Pennsylvania Hospital some years later. At the time of his death he was Vice-President and Honorary Librarian to the College of Physicians, a Trustee of the University of Pennsylvania, a Director of the Philadelphia Library, a Manager of the Pennsylvania Institution for the Blind, of the University Hospital, and a Vestryman of St. James Church, showing in this way his great interest in all measures devoted to the improvement of his fellow-man. At one time Dr. Hutchinson was Secretary, then Treasurer, and finally President of

the Pathological Society. His most widely known contribution to medicine is the article on typhoid fever in Pepper's *System of Medicine*, which has been universally recognized as one of the most masterly studies of the disease extant.

The following resolutions, passed by the College of Physicians at a special meeting, are indicative of the admiration of his professional brethren:

"The College of Physicians of Philadelphia has heard with profound regret of the death, after only a few hours' illness, of its Vice-President, Dr. James H. Hutchinson, and hereby records its profound sense of the loss—to human eyes irreparable—thus occasioned, not alone to its own body, but as well to the whole medical profession of the city and vicinity, and to the entire community.

"Still in the prime of life, with skill and knowledge broadened and confirmed by wide and ever-growing experience, Dr. Hutchinson shone prominent both as a faithful and trusted family physician, and as a consultant whose advice and assistance were largely sought for and highly prized by his fellow-practitioners, all of whom recognized both the value of his counsel and the uniform candor and conscientious honesty with which it was bestowed.

"A Fellow of this College for more than a quarter of a century, he served it in council and committee-room with a zeal and fidelity which are amply witnessed by its transactions and by the records of its library, and which but met with its just recognition in his unanimous election to the honorable office of Vice-President.

"A scholarly and accomplished writer, an able clinical teacher, a skilful and judicious practitioner, well exemplifying the highest and best type of the practical physician; a high-minded, honorable Christian gentleman, tried and true in all the various relations of an active, busy life—his death leaves a gap which can never be filled; a precious memory which will endure long after those who now grieve for him shall themselves have passed away forever."

NEWS ITEMS.

St. Luke's Hospital Fund.—St. Luke's Hospital, New York, is endeavoring to raise \$50,000 to pay its indebtedness. Part of the money, \$34,000, is due the treasurer for funds advanced by him to the institution. This indebtedness has been increased by the growing demands on the hospital. About \$37,000 has already been secured, and it is hoped to obtain the rest before many weeks. The hospital receives no aid from the city.

Obituary.—Dr. Charles H. Nichols, the Superintendent of the Bloomingdale Insane Asylum, died at his home, on the asylum grounds, December 16th. Dr. Nichols spent last summer in Europe studying the management and construction of foreign asylums, and since then has been in failing health. He was graduated from the University of New York and from the University of Pennsylvania in 1843. Since the latter date he has devoted himself to the care of the insane. In 1852 he was appointed by President Fillmore to superintend the construction of the Government Hospital for the Insane, resigning his position at the Bloomingdale Asylum for that purpose. In 1877 he again assumed the management of the latter institution.

Dr. David Prince, one of the oldest and most successful surgeons of Jacksonville, Illinois, died on December 19th from pneumonia. Dr. Prince had twice been a delegate to the International Medical Congress.

Fatal Result of Extension in Locomotor Ataxia.—Another fatal result from extension for locomotor ataxia has been reported by Dr. C. Bosari, of Modena. At first the treatment appeared to reduce the ataxic symptoms, but a leptomenigitis supervened followed by death. Dr. Bosari is not clear in his own mind concerning the causal relation of extension to the unfortunate results.

Faith-healers Heavily Fined.—The "new evangelists," as the Scandinavian sect of the faith-healing believers is called, have been heavily fined, in Brooklyn, for disobedience of the laws and ordinances governing the treatment of minors sick with contagious disease. Three persons, on four charges, were called upon for \$450 in fines, or to go to jail. Some have accepted the latter alternative, and others say that they will follow rather than give their children medicine or observe the isolation orders of the Board of Health. In regard to contagious diseases, these people act on the principle that if "the Lord" causes a disease to be of a communicable nature, it is right that it should spread, and that if children die from such diseases, "the Lord is simply taking home his own."

A Courageous Ambulance Surgeon.—Ambulance Surgeon Mead, of St. Mary's Hospital, Brooklyn, was called to an elevated road accident, and found that the mangled, yet conscious, patient, had fallen and been caught under a locomotive. The surgeon administered a hypodermic to the injured man before the latter had been disentangled from the track, and while the two, surgeon and patient, were lying beneath the fire-box of the engine.

Medico-legal Society of New York.—Two interesting and important papers were read before the Medico-legal Society, on December 18, 1889, one by Clark Bell, on "Hypnotism;" the other by Charles G. Garrison, Justice of the Supreme Court of New Jersey, on "The Province of Medical Expertism." Mr. Bell held that the medical profession in America does not give hypnotism the attention its importance deserves. Judge Garrison, in speaking of "Medical Expertism," analyzed the legal and medical minds, and showed that they proceeded in radically different ways.

It was the annual meeting of the Society, and the following officers were elected: President, Clark Bell; First Vice-President, Dr. W. W. Godding; Second Vice-President, Albert Bach; Secretary, Emily Kempin; Assistant Secretary, Dr. William L. Baner; Corresponding Secretary, Moritz Ellinger; Treasurer, E. W. Chamberlain; Librarian, Benno Loewy; Assistant Librarian, Dr. G. Bettini de Moise; Curator and Pathologist, Dr. Frederick Peterson; Chemist, Professor H. A. Mott, Jr.; Trustees, W. G. Davies, Dr. Frank H. Ingram, E. W. Chamberlain; Permanent Commission, Judge C. G. Garrison, Professor F. D. Weisse.

The annual banquet of the Society was held in the evening at the Marlborough Hotel.

Sterilized Milk for Sale.—It is stated that some of the druggists of Leipzig have arranged to prepare sterilized milk, after the method of Soxhelt, and dispense it like other articles.

The Polyclinic Medical Society.—The Polyclinic Medical Society gives, under its auspices, a lecture, or holds a meeting of its Therapeutical Section, every Tuesday evening at 8 o'clock, at the College Building, N. W. corner of Broad and Lombard Streets, during the season. The lecture pertains to subjects of a clinical and scientific character, and its monthly meetings will be devoted to the physiological and practical investigation of therapeutic agents. The whole course is free to members of the profession and to medical students. The following lectures and meetings are announced for 1890:

January 7th, Dr. Alexander MacCoy, The Clinical Features of Tuberculosis of the Larynx.

January 14th, Dr. B. F. Baer, Abdominal Surgery.

January 21st, Dr. Thomas G. Morton, Modern Treatment of Club-foot.

January 28th, Meeting of the Therapeutical Section.

February 4th, Dr. Edward P. Davis, Use of the Obstetric Forceps.

February 11th, Dr. John B. Roberts, The Anatomy of Facial Expression.

February 18th, Dr. J. Henry C. Simes, Prostatorrhoea.

February 25th, Meeting of the Therapeutical Section.

March 4th, Dr. R. W. Seiss, Inflammation of the Eustachian Tube.

Homœopathy in New York City.—A contention has arisen between the two wings of the homœopaths in New York City for the control of the hospital on Ward's Island—a city institution. The "liberals," or "renegades," are in possession, while the "ultras" are out, and are trying to get in. The orthodox party appear to be supported by their County Society, while the heretics have the leading journal on their side. The editor of the latter, Dr. Egbert Guernsey, is quoted as saying that since the death of Dr. Bayard there has not been in New York a genuine homœopathic practitioner; and that even his opponents do not hesitate to prescribe drugs regardless of the so-called "science of homœopathy."

The British Pharmacopœia.—The General Medical Council of Great Britain has directed the publication of an *Addendum* to the *Pharmacopœia* of 1885. The *British Medical Journal* of December 7th states that it will contain only remedies of undoubted value which have come into use during the last four years. Dr. Atfield will have the principal responsibility in the work, but will be assisted by Dr. Quain, Sir Dyce Duckworth, and Mr. Carter. The *Addendum* will appear in 1890.

Investigation of Electrical Execution in France.—The medical section of the French Academy of Sciences will investigate the subject of execution by electricity. The inquiry will be aided by the expert electrician, Marcel Desprez. The visit of the American inventor, Edison, and his presentation before the Academy of his views concerning the painless and instantaneous extinction of life by electricity, have been the incentives to this investigation.

The Fire in the Presbyterian Hospital, New York.—The Presbyterian Hospital of New York City suffered by fire, December 19th, and the patients were safely removed. One very ill woman has since died, whose end may have been hastened by the accident. The fire took place in the north wing of the hospital, which was damaged, according to the estimates of the Trustees, to the extent of about \$100,000. It is reported that the elevator would not work, and that no water would flow through the fire-hose with which the wards were provided. If the institution had been more crowded than it was, or if the fire had occurred later in the night, it is extremely probably that great loss of life would have ensued. The moral is that no hospital or public institution should omit to have a regular testing of its fire apparatus and escapes; or when they get out of order to double the night-watch and every other customary precaution.

The Pauper Insane of New York—The New York Charities Aid Association recently held its anniversary meeting. Dr. C. F. Chandler, formerly President of the Health Board, was reflected presiding officer. The object of the Society this winter will be the reintroduction of the bill to remove the pauper insane from the various county poor-houses and place them in the hospitals to be supported by the State. The Supervisors of the Poor united last year to oppose this measure, and secured its defeat by a small vote. The principal medical societies throughout the State have approved the bill that was defeated last year, or some equivalent measure that will place the insane poor in State hospitals for the insane.

The Hoagland Laboratory.—An announcement by the Trustees of the Hoagland Laboratory, of Brooklyn, has been received, which shows that it is organized for practical laboratory work in bacteriology, physiology, histology, and pathology. A moderate fee will be charged to students who desire to take a full course in some special branch. To the medical profession, however, the advantages of the Laboratory are available almost free of charge, with the exception that when animals are required in any experimentation they must be supplied or paid for by the investigator. All the best foreign journals of laboratory research are in the library.

Growth of Medical Photography.—The uses of photography in medicine are increasing. There are amateur photographers on the staff of a large number of the London hospitals whose prints are in great demand in the surgical wards. The improvements that are now being made in the Royal College of Surgeons include rooms for photography. The President of the College, Mr. Hutchinson, referred to this department in his remarks at the late annual meeting as becoming more and more important in surgical case-reporting.

"Vita Nuova" a Cocaine Preparation.—The "Vita Nuova," of Mrs. Harriet Hubbard Ayer, is said by the *Druggists' Circular* to be a preparation of cocaine, as dangerous as it is pleasant to the taste. The same journal criticises the prominent men and women who have publicly endorsed this much advertised nostrum, when probably, at the most, they have not used more than a single bottle of the stuff. In cases where the use of it

has been continued for any length of time, "a testimonial from any such person would be about as valuable as that of a morphine maniac testifying to the beneficial effects of the drug which had enslaved him."

Scarcity of Physicians in Austria.—It is stated that in consequence of the scarcity of medical men in some parts of Austria, an order has been issued by the Minister of Education that men recently qualified who have come from these localities must return to their homes to practise for a certain number of years, unless they are fortunate enough to obtain some Government post elsewhere.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 17 TO DECEMBER 30, 1889.

By direction of the Secretary of War, CHARLES T. ALEXANDER, *Lieutenant-Colonel and Surgeon*, will be relieved from duty as Medical Director Department of the Columbia, on receipt of this order at the headquarters of that Department, and will report in person to the commanding general Division of the Atlantic, for the purpose of preparing for, and becoming familiar with, the duties of Attending Surgeon in New York City. He will also, upon his arrival in New York, assume the duty of Examiner of Recruits in that city. William E. Waters, Major and Surgeon, will take temporary charge of the office of Medical Director Department of the Columbia, upon the relief of Lieutenant-Colonel Alexander, and perform the duties pertaining thereto.—S. O. 297, A. G. O., Washington, December 14, 1889.

With the approval of the Secretary of War, the leave of absence granted C. N. B. MACAULEY, *Captain and Assistant Surgeon*, in S. O. 166, Department of the Missouri, November 8th, is extended one month.—Par. 10, S. O. 294, A. G. O., December 18, 1889.

MCCREERY, GEORGE, *Captain and Assistant Surgeon* (Fort Warren, Massachusetts).—Is granted leave of absence for one month, to take effect upon the arrival at that post, for temporary duty, of Samuel Q. Robinson, Captain and Assistant Surgeon.—Par. 6, S. O. 289, *Division of the Atlantic*, December 18, 1889.

ROBINSON, SAMUEL Q., *Captain and Assistant Surgeon* (Fort Hamilton, New York Harbor).—Will proceed, without delay, to Fort Warren, Massachusetts, and report to the post commander for temporary duty.—Par. 5, S. O. 289, *Division of the Atlantic*, December 18, 1889.

By direction of the Secretary of War, PAUL R. BROWN, *Captain and Assistant Surgeon*, now at Trinidad, Colorado, will report in person to the surgeon in charge of the Army and Navy General Hospital, Hot Springs, Arkansas, for admission to, and treatment in the Hospital.—Par. 16, S. O. 296, A. G. O., December 20, 1889.

DEWITT, CALVIN, *Major and Surgeon* (Fort Missoula, Montana Territory).—Is granted leave of absence for one month, to take effect not later than January 1, 1890, with permission to apply to Division Headquarters for an extension to include February 27, 1890.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING DECEMBER 28, 1889.

STONE, E. P., *Passed Assistant Surgeon*.—Ordered to the "Independence," Mare Island, California.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.